

# THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXII.

SATURDAY, JANUARY 7, 1893.

NO. I.

## ORIGINAL ARTICLES.

### ON THE POSSIBILITY OF MALIGNANT DEGENERATION IN BENIGN GROWTHS.\*

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WITHOUT any special study of the matter, I had always accepted as a truism the statement that a benign growth might undergo malignant degeneration. I believe that it is the common understanding of the majority of the members of our profession that such a change may and does not infrequently occur.

A recent discussion on a tumor of the thigh led me to think that perhaps I might be in error in so confidently holding to this belief, and I began to look into the matter with some care. I take pleasure in laying before you, for your consideration, the results of such investigations as time has permitted me to make.

This question is one of more than merely theoretic importance. Its practical bearing upon the propriety of operative interference in the entire class of so-called benign tumors is apparent. If it can be shown that such growths are liable to undergo malignant degeneration with any degree of frequency, then it will clearly be our duty to regard them with more concern than we ordinarily give them.

In an inquiry of this kind, it is always well to know exactly what we are to attempt. Let me, therefore, state that my aim will be to answer the following question: Are there any facts to show that the so-called benign growths ever take on malignant action? That such a change may occur has been an article of the surgical creed almost from time immemorial. The fathers of surgery believed it as a matter of course, and such of the later authorities as Syme, Holmes, Erichsen, and Gross, all lay it down as a proposition which has never been contradicted. They seem not to give the matter any particular consideration, and never discuss it, seeming to accept it as a fact beyond the pale of discussion. Even so late a writer as Eve<sup>1</sup> does not state it as a general proposition, but contents himself with statements like this: "A fibroma may exist for many years and ultimately develop into a sarcoma."

\* Read before the Medical Society of the District of Columbia, at its meeting on November 2, 1892.

The pathologists, equally with the surgeons, seem to consider the question as one not worth debating. Billroth, while not alluding to it in so many words, yet shows that he believes it to be true, by saying, in reference to uterine polypi, that "toward the thirtieth year mucous polypi of the uterus occur; under some circumstances they may change to cancer." He also states that there is no absolute line between malignity and benignity.

Birch-Hirschfeld,<sup>2</sup> Ziegler,<sup>3</sup> Klebs,<sup>4</sup> Delafield and Prudden,<sup>5</sup> Pitfield Mitchell,<sup>6</sup> and many others, agree in accepting the change as one not unusual.

So far as concerns laryngeal growths, this subject has been exhaustively studied by Semon. As far back as 1878, in an article in the *Medical Record*, of London, he tabulates five hundred cases of intralaryngeal growths, mostly papillomata, removed by various operators. In only two of these was there any suspicion that a growth, innocent in the beginning, had become malignant. In 1887, in connection with the case of the Emperor Frederick, a warm controversy was carried on in the columns of the *British Medical Journal*,<sup>7</sup> between Semon and Lennox-Browne, the latter contending, as he has elsewhere done (*The Throat and its Diseases*), that non-malignant tumors of the larynx frequently undergo malignant degeneration, while Semon held that the change in question was one of extreme rarity, if, indeed, it ever took place. In this opinion he was sustained by Butlin. It must be confessed that Browne has brought forward but few and doubtful cases in support of his opinion. In 1887, Semon had collected over three thousand cases of laryngeal growths, removed by various operators, in five of which it might be considered that this change had taken place, but only one, that of Elsberg, was reported with any degree of fulness.

Semon considers that, if such a change ever does take place, there must be in the patient some predisposition to malignant disease. As he clearly shows, these growths are usually small and the piece submitted to microscopic examination might not show malignant change, and yet other parts of the growth might contain clear evidences of malignancy. In one such growth, removed by him, two-thirds of the section showed nothing but the changes due to inflammation, while the remaining third, constituting the base of the tumor, was a mass of epithelioma. Now, had this growth been imperfectly removed and submitted to the microscopist, he would have

reported (and rightly, too) that the specimen showed nothing beyond the changes usual in inflammation. Had the growth increased and been again removed, microscopic examination would have shown clear signs of malignancy. This would have been set down as a case in which an innocent growth degenerated into a malignant one, when, in truth, it was malignant from the start.

J. Solis-Cohen, Bosworth, Gottstein, Lennox-Browne, Seiler, Fauvel, and other authorities in this branch of medicine, all state that such a change is possible, and some of them think that it frequently occurs. None, however, gives any facts to support his assertion, but, like so many other medical traditions, the statement is handed along from one to another and accepted by the latest authority on the mere assertion of those who have preceded him.

In a study of benign tumors of the mammary gland, Brandt<sup>8</sup> considers that malignant degeneration may take place in them, but only with extreme slowness. He considers, however, that most breast-tumors should be removed as a measure of wise precaution.

I believe, therefore, that I am warranted in saying that there is almost complete unanimity of opinion on this question among surgeons and pathologic anatomists. Those who allude to it at all, do so favorably, while the others seem to consider it as being so well accepted a fact as hardly to need mentioning. No one, so far as I have been able to learn, denies it.

Now, while that which is believed by common consent to be true has a certain weight as corroborative evidence, it is not proof, and unless we can find something stronger to sustain our case, we must rest content with the verdict "not proven."

There have been many doctrines in medicine that have been accepted as true by the entire body of the profession, which we now know to be completely false, so that it behooves us to look a little further in our search for facts.

Is there anything in the origin and growth of neoplasms, as we now understand them, that would tend to favor or negative the possibility of such a transformation as the one we are studying? The answer to this question will involve an excursion into the modern theory of tumors and tumor-growth.

The classification of new-growths most in accord with our present knowledge is the blastodermic. This is based on the fact that all the tissues and organs are developed from the three blastodermic layers, and that the tissues derived from any one layer are more or less histologically analogous. In neoplasms the analogy becomes complete and the cells revert to the type-cell of the layer from which they were derived. This enables us to classify these growths with approximate exactness. For example,

if the connective-tissue cell be the predominating characteristic of the growth, then we know that we have to do with a tumor of mesoblastic origin. So, a growth composed of epithelial cells of a certain character will be referred to the epiblastic layer. Speaking in general terms, the epiblastic growths are either benign or non-metastatic; the hypoblastic are both malignant and metastatic; while the mesoblastic group contains benign and malignant, metastatic and non-metastatic tumors. I desire to call especial attention to this peculiarity of the mesoblastic group, for it is among tumors of this class that we find most of the evidences of change from benignity to malignity. In this class belong fibromas, lipomas, myxomas, chondromas, and osteomas, of the innocent growths, while all the forms of sarcoma represent the malignant types. The type-cell of all of them is the connective-tissue cell. This is their characteristic. In one form or another it occurs in all of them. The distinction between the cells of benign and malignant growths of this group is not marked. According to Wilks and Moxon,<sup>9</sup> it is the quality of the intermediate tissue that determines the character of the tumor as fibroma, myxoma, or sarcoma. In the simple-tissue tumors the cells are few and the inter-cellular substance greatly predominates; but when from any cause, the cells begin to be produced more rapidly and the inter-cellular substance to become more scanty, then we have a sarcoma. Thus, we see that the difference between a fibroma and a sarcoma is more one of degree than of kind. It is the opinion of these observers that "any of the previous group of tumors (fibroma, myxoma, etc.) would become sarcoma by the rapid growth of the cellular elements and deficient development of the inter-cellular matters."

Butlin,<sup>10</sup> in speaking of chondromas, says that bone, fibrous tissue, gland-tissue, and sarcoma-tissue, all or severally, may occur in combination with cartilage, and that sarcomas may become organized into fibrous tissue, cartilage, or bone. Ossifying and chondrifying sarcomas are sometimes taken for osteomas and chondromas, but "they remain," he says, "in effect, sarcomas, nine-tenths of whose structure has been transformed into some simple tissue, but with all the capabilities for evil which the most lowly-organized sarcomas possess."

It is a peculiarity of all neoplasms that the tissue of which they are composed is less highly organized than the normal tissues of the body. Now, bearing this fact in mind, and given a habit of body predisposing to malignant disease, is it unreasonable to suppose that this malignant tendency should show itself in a degenerate form of tissue rather than in the normal healthy tissue, particularly when both the innocent and the malignant growth are derived from

the same layer? Or, to take a concrete example, will sarcomatous degeneration be more likely to show itself in an already existing fibroma of the mamma than in the healthy gland-tissue? It seems to me not unreasonable to assume on *a priori* grounds that the malignant disease will be first shown in the more lowly-organized tissue.

One of the prime factors in determining malignant degeneration in healthy tissue is irritation. Now, it would seem that healthy tissue should resist the effects of irritation longer than unhealthy, and we should accordingly expect that if malignant change should take place in a benign growth, irritation or excitation of the tissues would have a large share in it. This is in accord with the clinical facts. In almost every case in which a benign growth has been assumed to have become malignant, the evil change has been laid at the door of irritation.

So far as we have gone, we have seen that the almost uniform testimony of surgeons and pathologists is in favor of the possibility of malignant degeneration of benign growths, and that there is nothing in the modern theory of tumor-growth inconsistent with such a change; but the medical mind of to-day cries out for facts. These are the days of skepticism in matters medical; and every theory and belief, no matter how ancient and venerated, must be tried anew by the touchstone of modern investigation. It is the main purpose of this communication to endeavor to find out whether this theory has enough facts in its favor to sustain it, or whether it must fall and be retired to the limbo of creeds outworn. The conditions of our inquiry narrow the field of investigation very materially. We must exclude all cases in which a non-malignant growth has been removed and a malignant growth has arisen in its site or in the scar. There are numerous instances of this kind on record, and any surgeon of experience could doubtless furnish one or more from his case-book.

In the second place, it is essential that the facts in each case be beyond cavil. This excludes all cases recorded before the time when the minute anatomy of neoplasms became so well understood as it is now. The time is not so very far distant when all malignant growths were called cancer. Mere clinical observation is not sufficient to determine the question of the innocence or malignancy of any particular growth.

Thirdly, the observations on which any conclusive opinion may be based should be made by those who, by reason of experience or special skill, are of such eminence as to give their opinions an unquestioned authority.

And, fourthly, it will not do to include cases in which an innocent growth in one part of the body is invaded by secondary deposits from a malignant

neoplasm situated elsewhere. A case of this character is the one recorded by Fenwick<sup>11</sup>, in which a small fibrous nodule surrounding the orifice of one of the ureters became invaded by secondary deposits from a carcinomatous growth in the liver and stomach.

Hampered by these restrictions, I doubted the possibility of finding in medical literature observations recorded with such care as to decide the question either one way or the other. It is proper to state here that personally I have no knowledge of any such change, and I can well understand how a surgeon of wide experience might never see such a case. In order to fulfil the conditions essential to certainty, he must be able to see the case in its very incipency, and to follow it to its very end. Even then there might remain a doubt as to the correctness of the diagnosis. Let us suppose, for instance, that a surgeon sees a case of breast-tumor in its earliest stage, possessing none of the manifestations of a malignant growth, and having all those of an innocent glandular tumor. As time goes on, the tumor, still under his observation, begins to grow rapidly, cause pain, contract adhesions, disturb the general health, and, in short, behave so as to demand removal. The growth is removed, examined carefully, and found to possess clear elements of malignancy. Now, the surgeon is satisfied in his own mind that the growth was innocent at first, but he cannot absolutely prove it. Of course, the chances are in favor of his being right, but probability is as far as he can go. This is not a far-fetched assumption, as is shown by the case reported by Jonathan Hutchinson, Jr.<sup>12</sup> In 1873, a woman of fifty-four came under the care of Mr. Hutchinson, Sr., for a tumor in the left breast, which had been noticed for six months, and was then three inches in diameter. It was removed, and proved to be an encapsulated adenoma, with a few cysts. Thirteen years afterward the woman was in good health. She had a daughter who had noticed from girlhood a small round tumor beneath the skin of the left breast, which was "as large as a cherry, and did not grow." When she was forty-four years of age considerable growth took place around the tumor, and Mr. Hutchinson found a hard mass adherent to the skin. He diagnosed scirrhus of two years' standing. The breast and axillary glands were removed. The patient was well at the end of ten years. Microscopic examination showed round-celled adenoma imbedded in scirrhus. The appearances clearly showed that the carcinoma had invaded the adenoma. In this case the element of heredity is added to the other probabilities in favor of a change from benignancy to malignancy, but it still remains only probability. Again, scirrhus might have invaded the gland had there been no adenoma there



at all. As Paget,<sup>13</sup> in speaking of these adenomas, fitly remarks: "On the whole, one might expect that if a woman have a tumor of this kind in her breast, cancer would be more apt to affect it as a morbid piece of gland than to affect the healthy gland."

In the report of the Middlesex Hospital for 1884 is an account of a case in which carcinoma supervened upon a multilocular cystic adenoma of thirty-four years' standing. Similar to this is the case occurring in Dr. Hartley's service in the New York Cancer Hospital, as related by Dowd.<sup>14</sup> Here the patient was thirty-eight years of age. When ten years old he had noticed a hard, insensitive, pea-sized tumor in his neck below the right submaxillary gland. This showed no change for fifteen years, when it became as large as a hickory-nut, but showed no other change for ten years or more, when it began to grow rapidly. It was excised twice during the following three years, and when seen in September, 1891, consisted of two lobes, each as large as a hen's egg.

In the same article is an account of another case in a woman of sixty-seven, who had had several wens in her scalp for ten years. In July, 1891, one of them became painful and tender and soon ulcerated. On removal it was found to be an epithelioma extending down to the periosteum. The other tumors were ordinary wens, as shown by microscopic examination. Shattock<sup>15</sup> also reports a case of cystic, squamous-celled carcinoma, arising in a sebaceous cyst of the scalp.

Taking into consideration the elements of uncertainty surrounding all merely clinical observations, it is to the pathologic anatomist rather than to the surgeon that we must look for the evidence necessary to settle this question. Can he show us a growth containing within itself, at the same time, unmistakable evidences of innocent and of malignant action, and presenting these changes in such a way as to show that the one has shaded into the other?

It is obvious that these conditions are hard to satisfy, but if only one such growth can be shown it will be sufficient to establish the fact.

In 1888, Mr. T. Charlewood Turner<sup>16</sup> showed to the Pathological Society of London a tumor of the size of a hazel-nut from the spinal cord of an obese woman. The left half of the growth was distinctly fatty, but the right half consisted of interwoven strands of fibrous tissue, rather profusely studded with oval elongated nuclei and leukocytes—in short, sarcomatous tissue. This, at first sight, would seem to answer the conditions of our inquiry and to decide our question in the affirmative; but it is impossible to say whether the fatty change was primary or secondary. If primary we have a case fulfilling

all of our conditions; if secondary, we are as far from an answer as ever. Taking into consideration the excessive fatness of the patient and the well-known fact that sarcomata not infrequently undergo fatty degeneration, the probabilities seem to be that the tumor was originally sarcoma and the fatty deposit secondary and not primary.

For many years past gynecologists have been removing from the abdomen fibroid, or, more correctly speaking, myomatous tumors. These are undoubtedly benign growths and are so accepted by all pathologists. Let us see if we can find any evidence of malignant degeneration in these growths.

Mr. Alban Doran,<sup>17</sup> a gynecologist of repute, reports a case of uterine myoma, in which there was beginning sarcomatous degeneration. He gives a full history of the case, with drawings of the microscopic appearances, which seem to bear out his conclusions. In a series of two hundred and five operations for the removal of fibroids of the uterus by Martin,<sup>18</sup> of Berlin, four of the tumors were intra-parietal encapsulated myomata, undergoing sarcomatous degeneration. Schroeder<sup>19</sup> states that primary degeneration of fibroid tumors into carcinomata hardly ever occurs (but one case having been reported), but that the change from a fibroid to a sarcoma is not infrequent. "We cannot as yet," he says, "determine how often this change from a benign fibroid into a malignant sarcoma takes place. There is no doubt that it may take place." He considers that the formation of the fibroid sarcoma of the parenchyma of the uterus is in some way due to the presence of a round fibromyoma or a fibrous polypus. "At any rate," he says, "it not infrequently proceeds from a degeneration of these."

The latest case is that of Ehrendorfer,<sup>20</sup> recently reported. This is given in full and is accompanied by a careful description of the microscopic appearances, leaving no room for reasonable doubt that the case was one of primary carcinomatous degeneration of a uterine myoma; but it is useless to present further citations. The fact seems well enough established that benign growths may undergo malignant degeneration. It is but right to say that many other gynecologists equally eminent deny the possibility of any such change, but the weight of the evidence seems to be in its favor. Such is the character of the evidence that I have to offer for and against this theory. I regret that time has not been available for a more extended search of the literature of medicine.

It seems to me that the following conclusions may legitimately be drawn:

1. That benign tumors may undergo malignant degeneration has been accepted as true by most clinical observers and pathologists.



2. That there is nothing in the modern theory of tumors and tumor-formation to contra-indicate the possibility of such a change.

3. That the facts now on record are sufficient to show that such a change may and does occur, although but rarely.

4. That the change is more frequent in growths of mesoblastic origin, and more particularly in the so-called uterine fibroids than in any other class of neoplasms.

## REFERENCES.

- 1 Moulain: Treatise on Surgery, p. 114.
- 2 Birch-Hirschfeld: Lehrbuch der Path. Anat., i, p. 206.
- 3 Ziegler: Path. Anat.
- 4 Klebs: Handbuch der Path. Anat., i, 1207.
- 5 Delafield and Prudden: Handbook of Path. Anat., 3d ed., p. 125.
- 6 Pitfield Mitchell: Philosophy of Tumor-disease, *passim*.
- 7 Brit. Med. Journ., 1887, vol. i, pp. 1239, 1305, 1361, 1412.
- 8 Brandt: Norsk Mag. f. Laegevidensk., 1890, v., pp. 435, 552, 603.
- 9 Wilks and Moxon: Path. Anat., 3d ed., p. 662.
- 10 Internat. Ency. Surgery, vol. iv, p. 574.
- 11 Trans. Path. Soc. London, 1888, p. 169.
- 12 Ibid.
- 13 Paget: Surgical Pathology, p. 365.
- 14 New York Medical Record, vol. xli, p. 435.
- 15 Trans. Path. Soc. London, 1890, p. 309.
- 16 Trans. Path. Soc. London, 1888, p. 25.
- 17 Trans. Path. Soc. London, 1890, p. 206.
- 18 Centralblatt für Gynäkol., 1888, p. 389.
- 19 Schroeder: Ziemssen's Ency., vol. x, p. 225.
- 20 Centralblatt für Gynäkol., July, 1892.

**FRACTURE OF THE PATELLA TREATED BY  
CONTINUOUS EXTENSION; PATIENTS  
NOT CONFINED TO BED.**

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Two varieties of treatment of fractured patella are generally recognized, the mechanical and the operative. It is not my intention to allude to the latter method, except in a general way; nor, in fact, to the devices of the former plan except as they may be employed to illustrate the method of treatment that I present. The indications to be met in the treatment of this fracture are the stereotyped ones that are applicable to all fractures, namely, the reduction of the fragments and the holding of them in place until a proper degree of union ensues to permit of the removal of the retaining forces. In fracture of the patella the uppermost fragment is drawn upward by the influence of the quadriceps extensor muscle, while the lower is somewhat displaced downward by means of the non-muscular tissues attached to it. Ordinarily, crepitus can be easily elicited between the fragments, provided the attempt be made before the formation of the firm blood-clots that become closely connected with the broken surfaces of the bone within a few hours after fracture. The failure of the medi-

cal attendant to obtain crepitus at this time should be attributed to the presence of these clots rather than to the influence of the stretched aponeurotic tissues connected with the upper surface of the patella. The presence of these clots and their influence in separating the fragments are frequently and easily demonstrated during the operative technique of wiring the patella for fracture.

The steps necessary for the reduction are, first, the extension of the leg and elevation of the limb to secure complete relaxation of the quadriceps extensor muscle; second, the drawing together and retention of the fragments in position until some form of union insures sufficient strength to properly maintain them in place. It is hardly necessary for me to describe the various instrumental means heretofore employed to effect the reduction and retention of the fragments in this fracture. It is sufficient to say, however, that their basis-action consists in extension applied directly or indirectly to the upper fragment and the holding of the lower fragment upward in position. The extension is represented in these cases as applied to the upper fragment and to the thigh, and also to both of these parts simultaneously. It is manifest to one familiar with the relationship of the tissues composing the thigh that extension applied to the thigh alone can exercise but little other restraining influence on muscular contraction than that dependent on coaptation pressure, because the dense fascia lata intervenes between the muscles of the thigh and the integument to which the extension is applied. However, when extension-apparatus is applied to the upper fragment of the patella with sufficient firmness to meet the indication, then, indeed, some command of the quadriceps muscle is secured. But even in this instance the inequality, severity, and direction of the pressure necessarily brought against this fragment, together with the absorption of the surrounding soft parts incident to the pressure, quickly render its influence insecure and migratory, unless constant and tedious, not to say painful attention be given to the case.

In my judgment, the feature most commendable in the wiring method is this: It permits patients to move around on crutches within a few days, thereby relieving them of the tedium and depression of long confinement.

Of the mechanical appliances permitting patients to be at once about on crutches, plaster-of-Paris, applied in the form of a thigh or hip spica, extending down to cover the foot, with an oblique patella-traction arrangement of the bandage at the knee, is most often selected. With this method, even in a very few days, the limited direct-extension influence that the splint exercises on the upper fragment disappears, owing to the shrinkage of the limb, and in

part to the pressure of the splint itself. The coaptation-influence on the tissues of the thigh, exercised by the splint at the time of its application, is soon much lessened on account of the same shrinkage. I have quite often witnessed the treatment of this fracture with the plaster-of-Paris splint when little attention was paid to the tissue-changes following its application, even up to final recovery; and candor compels me to state that in these cases the results were quite as satisfactory in all respects as in cases treated more actively and with seemingly better philosophy. I have often remarked that the results of the treatment of fracture of the patella with a plaster-of-Paris spica were much more convincing of the fact of how little treatment the fracture required than of the efficiency of this particular method. However this may be, it is surely a great desideratum to employ a means that, while it holds the fragments as well as possible by mechanical measures, still subjects the patient to as little confinement as if wiring of the patella had been done. The plan that I have employed, with some interruptions, for a number of years past can be divided for the sake of simple elucidation into five separate steps.

FIG. 1.

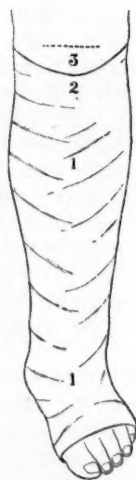


FIG. 1.—1, 1. Plaster splint as applied to leg. 2. Upper border of splint pressing lower fragment into position. 3. Lower fragment with line of fracture above.

FIG. 2.

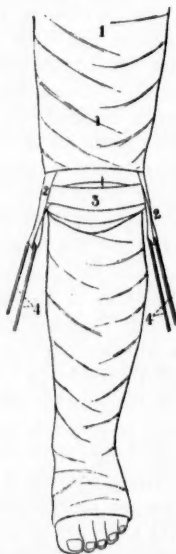


FIG. 2.—1, 1. Extension as applied to thigh. 2, 2. Front view of extension straps. 3. Adhesive straps retaining fragments in position. 4, 4. Rubber extension made taut while adhesive straps are being applied.

**First step (Fig. 1).** The first step consists in the application to the leg of a plaster-of-Paris splint, extending from the base of the toes up to and

partly around the lower fragment (3). The splint is firmly applied to the limb a sufficient time in advance of the succeeding steps to permit of its becoming thoroughly hardened. It is carefully rounded at the lower extremity (2), so as to press into position and hold there the lower fragment (3). Its functions can be said to be threefold: 1st. It serves to protect the foot of the patient from the pressure of the rubber extension, which acts from this part of the limb. 2d. It confines in place the lower fragment, and the pressure upward of the splint, due to the elastic force of the extension transmitted through it to the foot, retains the upper border of the splint in proper relationship to the lower fragment. At all events, any diminution of pressure on the part of the splint in this situation can be readily supplemented by the introduction of suitable pads between it and the lower fragment of the patella. 3d. It affords attachment to the lower end of the supporting rod or brace, intended to maintain complete extension of the limb while acting as a posterior support.

**Second step (Fig. 2).** The features of the second step are quite as strongly expressed by the illustration representing it as words can define them. This step consists in the application to the thigh of an extension-apparatus fashioned after the manner of the well-known Buck's extension, which reaches from the perineum to the upper border of the upper fragment (1, 1).

It is confined in position by the ordinary muslin roller. The adhesive element of this appliance terminates a little below the knee in a loop (2, 2) at either side, through which may be passed the rubber extending cord (4, 4), or to which may be connected hooks for the convenient attachment of the rubber cords or bands that are to pass around the bottom of the splint, and by means of which the extension is made and maintained. The broad triangular adhesive strips to which the extension loops are sewed are confined in position at the sides of the thigh by means of simple roller bandages. Moderate extension is then made on the loops by means of the rubber cords, in order to draw as far as possible downward the soft tissues of the thigh and the upper fragment of the patella. While the extension is thus being made, the roller bandage intended to hold the adhesive-plaster strips in place is covered by plaster-of-Paris rollers from the upper to the lower limits of the adhesive-plaster extension, and so fashioned as to control the upper fragment in the most serviceable manner while extension is in action. The object of this plaster-of-Paris addendum is, first, to aid in holding the primary dressing of the thigh in a firm position; second, and principally, to afford an upper support for the extending rod or splint to be placed behind the

limb, and to aid, also, in confining the upper fragment of the bone in proper relationship to its fellow, as will appear in the succeeding step.

The second step meets the following indications: First, it coaptates the tissues of the thigh, thereby exercising a controlling influence over muscular contraction, and is the agent causing extension of the integument and the subcutaneous tissue. Second, it makes direct extension of the quadriceps through its firm application to the upper fragment of the fractured bone and the tissues immediately above and around it.

*Third step.* This step consists in strapping the fragments of the patella in such a manner as to draw them well together and properly maintain them in position. These strips of plaster (3, Fig. 2) are fastened in position behind to a wooden support or brace, about two inches in width, one inch in thickness, and extending from near the upper

and may be defeated. These strips can be applied with greater care, convenience, and effectiveness, if traction be made away from the median line of the thigh, as represented in Fig. 2 (4, 4).

*Fourth step* (Fig. 4). This consists in fastening the posterior support or brace (2) in proper position, and fixing it there by means of plaster-of-Paris rollers carried around it and the upper and lower segments of the splint where they lie in contact with each other. These bandages harden quickly, and thus incorporate the posterior support firmly with their structure, forming an interrupted plaster-of-Paris splint, with a posterior connecting brace (1, 1, 2). The interval at 2 shows this brace with the patellar adhesive straps attached, by means of which the strips are retained in position.

*Fifth step* (Fig. 4). The posterior support in this illustration is unusually thick (2), being composed of wood. A small iron rod on each side of the posterior surface of the limb will answer much better for many reasons, and is less cumbersome. However, this one illustrates sufficiently well the importance of the posterior support, and better, perhaps, than a less conspicuous object. Fig. 4 shows the posterior support as placed against the posterior surfaces of the plaster splints previously described, and confined there by fresh plaster rollers. This should be accomplished while the extension force is in action. These bandages are represented as carried around the limb from the extremities of the support to the contiguous borders of the underlying plaster splints. As already mentioned, the hardening of these newly applied bandages incorporates the posterior support with the plaster-of-Paris structure so firmly that an unyielding common apparatus is formed. The object of this support is obvious to anyone. It serves to keep the limb extended, thus preventing undue traction on the fragment of the quadriceps muscle, and it affords attachment to the adhesive plasters that confine the fragments of the patella in proper position. Leather collars, properly fashioned and padded, passing around the limb above and below the patella, and drawn firmly toward each other by means of leather straps, as figured in the text-books, may be employed instead of this method of strapping. In either instance the hamstring tendons should be carefully protected from undue pressure by the interposition of some soft suitable material. After the apparatus is completely and suitably applied, the patient may be permitted to walk around, but the limb during this time should be flexed somewhat on the trunk by means of a long sling extending from the foot, which it supports, and carried over the neck of the patient. The employment of this expedient will flex the entire limb considerably on the trunk, and thereby cause greater relaxation

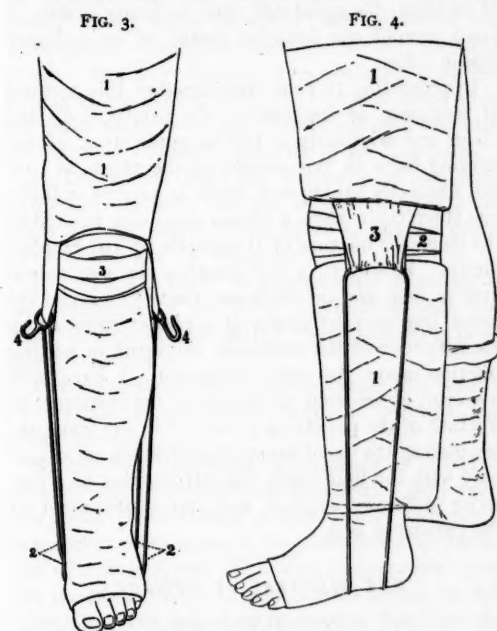


FIG. 3.—1, 1. Plaster bandage applied around thigh extension. 2, 2. Rubber extension in position and action. 3. Patella-retaining straps. 4, 4. Hooks for rubber extension bands.

FIG. 4.—1, 1. Upper and lower segments of interrupted splint. 2. Posterior support of splint covered by retaining straps. 3. Side view of extension strap.

border of the thigh portion of the splint to the lower part of the splint surrounding the leg. These adhesive strips should be applied cautiously, so as not to irritate the integument, and also to prevent either of them from being drawn downward between the fragments of the broken bone. If this accident happens, greater separation of the fragments ensues, and union of a serviceable kind is much delayed,



of the quadriceps extensor muscle, and also obviate the influence on the upper fragment of the involuntary contraction of the muscles that are associated in the effort of locomotion.

#### THE ADVANTAGES OF THIS APPLIANCE.

The following advantages appear to me to be quite clearly defined:

1. It apposes the fragments of the patella from the first as well as any other non-operative appliance can accomplish this purpose.
2. It maintains them in position better than any mechanical means yet employed, unless the patient be confined in bed and a constant and tedious scrutiny be exercised by the physician in charge.
3. It permits the patient to be up and around sooner and more comfortably than any non-operative method of treatment yet employed.

I have thus far treated nine cases by this method, with results equal to those of any other non-operative method, and with much more comfort to the patients. Like all methods, this one, too, has its fallacies. It is important to regulate the degree of elastic extension in accordance with the requirements of each particular case. If greater extension be employed than is essential, the straps by means of which the extension is secured may be torn or drawn away from their fastenings. At all events, great discomfort will be caused. It is proper to say, however, that a degree of extension may be employed which will be readily withstood by the straps at the earlier period of their application, which is out of all proportion to the requirements of the case, and at a later period would promptly cause slipping of the adhesive straps. In one instance, as a matter of experiment alone, I applied a degree of elastic traction to a case equivalent to forty pounds. It may be thought, perhaps, that the application around the thigh of the plaster-of-Paris casing, and introduction of the posterior support connecting the two portions of the splint, will interfere with the extension influence applied to the thigh itself. This, however, is not the case, as the extension acts independently of the incasing plaster, while at the same time the incasing plaster serves to confine the adhesive strips properly in position. If the interval between the plaster splints corresponding to the knee and popliteal space be not thoroughly and carefully covered, either with straps, cotton, or bandages, pain and edema will, for obvious reasons, take place there.

After the adhesive strips are properly applied to the patella, the intervals between the splints, behind and in front, should be filled in with layers of absorbent or other kind of cotton, and bandaged closely in place. At the time the posterior support is placed in position, cotton or

other suitable material for exercising moderate pressure should be interposed between it and the posterior surface of the knee, already the patella-retaining straps are applied, as then this material can be drawn firmly into place. As before remarked, the fragments should be carefully and properly strapped, and great care exercised in the application of the straps, else one of them may be drawn between the fragments, and before its discovery may cause greater separation and interfere with the union.

Finally, it is necessary that the plaster splints should be kept firmly apposed to the underlying surfaces, which, of course necessitates their being cut up quite soon after their application. The cutting up can be easily done by means of an ordinary knife after the manner usually employed in other forms of splints of a similar nature. If a proper portion of the splint be removed in the line of incision, the splint can then be firmly drawn in place around the limb by means of an ordinary muslin roller.

In presenting to your consideration this method of treatment of fractures of the patella, I do not claim any originality as to the application of extending force in this manner to the thigh, as I recall distinctly having seen, while an interne in Bellevue Hospital in 1870, a similar extension applied to the thigh for fracture of the patella by Dr. Stephen Smith. However, in that instance the patient was kept in bed, and no effort was made to control the lower fragment by means of a plaster splint or by the influence of the extension employed in making traction upon the upper fragment. I have not, however, as yet seen or learned of the treatment of fracture of the patella by a method in any way contemplating the use of extending influence associated only with the limb itself, the introduction of a posterior stiffening support, and non-confinement of the patient in bed.

#### THE DISPOSAL OF SEWAGE.

BY D. BEVAN, M.D.,

INSTRUCTOR IN HYGIENE AND CLINICAL MICROSCOPY IN JEFFERSON MEDICAL COLLEGE; BACTERIOLOGIST TO ST. AGNES'S HOSPITAL.

THE question as to the disposal of human excrement has agitated the mind of man from time immemorial. The earliest authenticated record we have of laws regulating the disposal of excreta is in the injunction laid upon the Israelites to so fashion their spears that they might dig holes in the earth and therein bury their dejecta. The Israelites being at this time a nomadic people, and the country but sparsely settled, such a method was without serious objections. With the establishment of permanent camps and cities, however, the people were compelled to devise other means.

In the earlier ages, and also at the present time in remote places, privies built on the ground-level over shallow holes or barrels, etc., sunk in the ground were deemed sufficient. These muck-heaps were often situated in close proximity to dwellings and the sources of water-supply. The solid portion was seldom removed, but accumulated, and formed a vast pest-heap, which, when it was decided to clear it away, was quickly disposed of in the most convenient water-course, though occasionally it was used for fertilization. The liquid portion, containing noxious organic and inorganic substances in solution, percolated through the soil, polluting the source of water-supply and vitiating the air passing through the ground into the house. With the enlightenment of the people and renunciation of the abject servility imposed by political demagogues and hierarchies, science, deprived of right and destitute of prerogatives, was importuned to relieve the nation of its stink, to check and annihilate the filth-diseases rampant throughout the civilized world. Sanitary science, thus fostered and encouraged, responded nobly and has now discovered processes whereby sewage may be purified and utilized without seriously jeopardizing public health.

In this article only the discussion of the most important methods will be taken up. These include (1) the precipitating process; (2) the filtration process, and (3) irrigation.

The objective point in precipitating processes is the separation of the solid constituents from the liquid portion and rendering the effluent pure, or at least innocuous.

Two methods are practised to attain this result: (1) By simple subsidence, and (2) precipitation with chemicals.

By the first procedure the sewage is directed through wire screens into tanks provided with overflow tubes. The sewage remains in the tank for a time sufficient to separate the fluid from the solids. The effluent is drawn off through the overflow tubes and the sludge removed and burned or sold for fertilization. The liquid is allowed to flow into the most convenient water-course. As chemical analysis has demonstrated that this liquid is but little improved by subsidence, this process has been given up for a more efficient one: The effluent is passed through perforated drains from one to one and a half feet under the ground-surface and allowed to escape into the subsoil. This method is, however, applicable only for single houses and small communities.

*Precipitation by chemical agents.* By the admixture of certain chemicals the suspended and a considerable amount of the dissolved matter is precipitated. The sewage should be treated while in a fresh condition and the chemicals added before it

is discharged into the receiving tanks or reservoir. These tanks are arranged in duplicate series, their number depending upon the amount of sewage to be treated.

The chemicals from which the best results have been obtained are lime, aluminium sulphate, and ferric sulphate, used separately or in combination. After precipitation, although the effluent is clarified, it is not innocuous, and to complete the purification it is expedient to combine the filtration with the precipitating process.

The filtration processes are effected by straining the sewage through substances having the faculty of arresting the solids and purifying the effluent. In some instances the sewage is simply strained through gravel or coarse sand. By this method the suspended particles are arrested, but the effluent is not purified. Carbon has been employed, but has proved unsatisfactory. Of all filtration processes, intermittent downward filtration through earth most completely purifies sewage. The degree of efficiency depends upon (1) the porosity of the soil, (2) the fall of the land. There should be one cubic yard for each eight gallons delivered in twenty-four hours. It is computed that one acre of ground will take up 100,000 gallons of sewage in twenty-four hours. To further facilitate the filtration of sewage, it should be delivered in pipes at least six feet under the surface. The filtration surface should be divided into four sections, and no one section should receive sewage for more than six consecutive hours. The surface of the plot should be ploughed in ridges on which vegetables are grown.

In England, irrigation, combined with either filtration or precipitation, has been pronounced the most efficient and profitable process for the utilization of sewage. The ground selected for the farm should be porous, light loamy soil. The farms are arranged in ridges along the tops of which run trenches carrying the sewage. The sewage is discharged at regular intervals, through series of sluiceways, into furrows. On the ridges are grown Italian rye, grass, peas, maize, cabbages, cereals, etc. The suspended organic matters are arrested in the soil and oxidized or resolved into harmless compounds by the organisms there present. The dissolved organic substances furnish pabulum for the growing vegetation.

This country, with its cities environed by extensive agricultural districts, affords the most happy and natural facilities for the employment of sewage.

A modification of the foregoing process might be adopted with profit to a municipality and the advantage of enriched lands and augmented crops to the agriculturist.

The sewage of the city of Philadelphia is disposed of in two ways: (1) By the sewers emptying

into the Delaware and Schuylkill Rivers, and (2) by being conveyed to the "Neck,"<sup>1</sup> where it is discharged upon the lowlands.

By the first process, our rivers (the sources of the city's water-supply) receive directly and undiluted the pestilential sewage of the city and the noisome refuse of the manufactories situated along their banks.

The rivers are thus practically converted into immense sewers, and the peculiar, delectable flavor of this mixture has conferred upon Philadelphia a most invidious distinction.

In the second method, the sewage is conveyed to the dumping-grounds in tank wagons, where it is transferred to sprinklers and promiscuously distributed in the furrows, over the vegetables, here, there and everywhere. The dumping-grounds ultimately become the most foul and noisome marshes conceivable. Not satisfied with begriming Nature's sweet face with the filthiest of filth, these philanthropic individuals turn their cattle into these muck-fields to pasture.

Though the effects of this latter method are not so widespread, its baneful influences are terribly obvious in the southern section of the city, and particularly in the southeastern section; for it is here that the milkman of the "Neck" carries a pail in one hand from which he dispenses elaborated garbage (so-called milk), tintured with sewage, and in the other a bucket in which he collects the crude article. Is it surprising, then, that this method should be considered not less objectionable than the first?

The pail system adopted by Rochdale, Nottingham, Halifax, Manchester, Leeds, and Birmingham, deserves passing notice. The "by-laws" require (1) specially constructed closets, and (2) suitable pails.

The floor of the closet, made of some impermeable material, is raised several inches above the ground-level, with a slope of one-half inch to the foot toward the door. It is well ventilated by a six-inch shaft extending from beneath the seat to above the roof. The seats are hinged in order that the pails may be readily removed. The pails are made of wood and coated with creasote, or tar and galvanized iron. They should be round, with flanged tops and have a capacity not exceeding eight cubic feet. An airtight-fitting lid is provided to prevent nuisance in removal. In use they are placed in juxtaposition with the seat. Some of the cities mentioned have a second pail for the reception of ashes, house-refuse, etc.

Feces, having been discharged into the pail, are sprinkled over with finely sifted ashes or soil, which act as deodorants.

Where the pail system is in operation the sewage is burned in furnaces, or by the addition of finely sifted ashes and lime converted into fertilizing material.

We think it not inopportune to conclude by mentioning the method adopted in London. The sewage is conducted by the main sewers to Barking and Crossness. Large works have been completed at Barking, and similar works are in process of construction at Crossness, for separating the grosser element. Before the sewage enters the works it is strained through iron cages which retain the larger bodies. This, amounting in one week to seventy tons, is incinerated in a Hoffman furnace. The liquid, having in suspension the finer particles and a considerable quantity of dissolved organic matter, is directed into large tanks for subsidence, which is facilitated by the addition of lime, thirty-seven grains, and iron sulphate, fourteen grains, to each gallon of sewage. In this manner twenty thousand tons are precipitated in one week. The sludge is forced by powerful pumps into tanks on board ships expressly constructed for the purpose. The ships, having a capacity of one thousand tons, convey the sludge to sea, where it is discharged. The effluent, containing but two grains of solid per gallon, disembogues into the Thames.

The abandonment of this process is but a question of time, for it is manifest that such enormous quantities of sludge will eventually so silt up the estuary of the Thames as to seriously interfere with commerce; and, indeed, may prove a grave source of pollution.

## CLINICAL MEMORANDA.

### A CASE OF PURPURA HEMORRHAGICA.

By WM. R. EARECKSON, M.D.,  
OF ELK RIDGE, MD.

On Sunday, July 3d, I was called to see James F., Jr., nine months old, who was suffering from an attack of cholera infantum. His previous health had been good. His father is a robust man, while his mother looks tuberculous, although no pulmonary trouble can be detected. There was one other child, an extremely plump and healthy sister. The grandparents are all living, and perfectly well, except the paternal grandfather, the nature of whose trouble I could not ascertain. The cholera infantum yielded readily to treatment, and in about ten days was completely cured. Directions were given that sterilized milk be used and the child be kept in the open air.

On July 20th, I was again called to see the patient, who was said to have broken out with a rash. I found a deep scarlet flush on the left side of the face, covering the forehead to the middle line, extending down the nose, lips, and chin to a point about midway between the mental prominence and thyroid cartilage. Thence the line of redness followed closely the position of the digastric

<sup>1</sup> The territory in the county of Philadelphia lying between the Delaware and Schuylkill Rivers and south of Snyder avenue.



muscle, and up in front of the ear along the course of the external carotid and temporal arteries.

There was no distinct rash, but simply a diffused redness, such as is sometimes seen from vasomotor disturbance.

The right side of the face was normal in appearance. I explained this localized flush by supposing that the left side of the face had been exposed to the glare of the sun, while the child lay in its cradle, the weather at the time being intensely hot. The hands and limbs, however, were normal, although equally exposed. The axillary temperature was 99.8° F., the pulse 112, and the child cried if lifted about, as though there was hyperesthesia of the skin. There was no sore-throat or other symptom to account for the condition. I ordered a simple mixture containing liquor ammonii acetatis, ℞, xv to 3j, every three hours. When I called on the following morning (July 21st) I found that the left cheek was almost normal in color, but presenting several little spots of eruption such as seen in measles, while the right cheek was almost as flushed as the left had been, the redness, however, not being so decidedly circumscribed.

The treatment was continued. The kidneys and bowels acted normally, and except for this flush and slight elevation of temperature I could detect nothing abnormal. The child, however, was fretful, and cried if lifted from his cradle. I ordered plenty of nourishment, fresh air, and stimulants at regular intervals.

On July 22d, I found very little flush, but on both cheeks there were a few spots of eruption similar in size to those of measles. These were confined exclusively to the face, but the wrists and legs, from about two inches above the knees, were rather more deeply colored than normally. The bowels moved three times, the evacuations being thin, but normal in color.

The condition was so much improved that I did not visit the child again until the morning of July 26th. I found the temperature slightly elevated, and the pulse rapid and weak.

In the afternoon, at about 5 P.M. I was stopped, while passing the house, and asked to see the child again, as it was bleeding. Its mother told me that at about 10 A.M. she noticed a purple spot, about the size of a flaxseed, on the right cheek, just below the angle of the mouth, which gradually grew to about the size of a five-cent piece. In turning over in bed, the child scratched this spot on the pillow. From that time until about 4 P.M. it bled constantly. The bleeding was stopped, finally, by means of hot water and pressure.

On close examination, I found about one hundred small red specks, about the size of pin-heads, scattered over the face and neck, and a few on the abdomen and thighs. On the legs, feet, wrists, and hands one could scarcely see any healthy skin, on account of the numerous red spots.

The trouble was then recognized to be purpura hemorrhagica or morbus maculosus of Werlhoff, and the parents were informed of the possible fatality of the condition. Aromatic sulphuric acid was ordered, together with a generous amount of diet and stimulant.

That night epistaxis began and continued, until, after milder astringents were found useless, I gave a spray containing subsulphate of iron and increased the amount of acid.

The temperature then was 100.4° F., and the pulse 122. The child was fretful and cried when disturbed. A slight enlargement of the spleen was noticed and slight tenderness was manifest on pressure.

During the day of July 25th, the child vomited a moderate quantity of dark blood, and the acts of vomiting started epistaxis again. An emulsion containing oleum terebinthinæ was ordered.

The pulse was markedly thready and weak, while the temperature remained about as previously. Epistaxis was controlled by nothing except the spray of Monsel's solution.

From July 29th to 31st, inclusive, the amount of blood vomited daily increased, as did also the frequency of vomiting. Epistaxis was, however, not quite so severe. The petechiæ increased in number, especially upon the abdomen, thighs and upper arms, but did not show any tendency to increase in size. The urine became deeply colored and stained the napkins a reddish-yellow, but the quantity was apparently normal. The stools were liquid and contained no blood. The spleen was perceptibly enlarged and slightly tender. Not being satisfied with the effect of the turpentine, although the quantity was carefully increased daily, the fluid extract of ergot was ordered in fairly large doses. The pulse-rate ranged from 120 to 132, while the temperature was from 99.6° to 100.2° F.

From August 1st to 5th, the acts of vomiting were less frequent, and the amount of blood diminished. Epistaxis was very slight. No blood was seen in the stools, but the urine still stained the napkins. On August 2d, large blisters containing serum were first noticed upon the right cheek where the cutaneous bleeding occurred, and by the next day the same condition was present on the dorsum of the feet and hands. By this time the skin was very pallid, especially on the face. Several times during these five days the child showed signs of brain-irritation—threw its head back, and rolled it about on the pillow. The ergot was continued.

On the morning of August 5th, the child was apparently stronger. The hemorrhage from the stomach was very slight, and only a slight, yellowish discharge from the nose was noticed.

Stimulants and nourishment were given regularly. Ergot was continued. That night, the father called me up, saying that the little sufferer was dying. Hemorrhage from the stomach and nose had started afresh; there were moist râles all over both lungs, and respiration was accelerated. The skin was peeling from the child's face, hands, and feet. The whole skin from the top of the right foot peeled off in one large piece. Increased doses of ergot, whiskey and milk were ordered. Ice was also given, while artificial heat was supplied by means of hot bottles.

On August 6th, the whole body was extremely pale. The spleen was enlarged. The bowels were moved only three times within the preceding twenty-four hours; the stools were watery. The hemorrhage diminished. The urine was about normal in quantity, but stained the napkins. The pulse was 142 per minute, and quite compressible. The temperature was 99° in the morning, and 98.8° F. in the afternoon. The weather was extremely warm and the child was much prostrated.

From August 7th, there was no further hemorrhage.

The temperature was 98°; the pulse 146, and very weak. The extremities were cool. Stimulating measures were kept up, and hot bottles were used.

On August 8th and 9th the child was apparently stronger and noticed those about it. The urine stained the napkins less than formerly. The pulse was from 150 to 158, the temperature 98°. The parents were apprised of the approaching end.

On August 10th, the moist râles continued. Respiration was rapid and shallow. The temperature was 100.6°, the pulse 154. The baby was apparently unconscious. The extremities were cold and marble-white, except for the small, brownish, hemorrhagic specks. Hot bottles and stimulants were used more often. The head was repeatedly thrown back and rolled about on the pillow. During the middle of the day this condition gradually gave way to coma, and at 3 P.M. death came.

The mother has since been delivered of a female child which had considerable umbilical hemorrhage.

This case was interesting to me on account of (1) the long prodromic period, during which no decided symptoms appeared; (2) the cutaneous hemorrhage and very marked desquamation at the site of greatest cutaneous hemorrhage; (3) the diversity of marked symptoms after the full development of the disease, consisting of hemorrhage from not only the nose and stomach, but probably also from the bronchial mucous membrane and into the brain.

No autopsy was permitted.

#### TO PREVENT LACERATIONS OF THE PERINEUM BY THE SHOULDER.

BY ALICE MACLEAN ROSS, M.D.,  
OF SWATOW, CHINA.

So much has been said regarding ruptured perineum that I feel reluctant about bringing the subject again forward, but in the matter of prevention, I feel sure that not enough has been said in regard to tearing by the shoulder. After great care has been taken, and every precaution exercised to prevent laceration by the head, and one is congratulating himself upon having managed matters so that the patient has escaped with perhaps nothing but a little nick in the fourchette, a final terrific pain drives the lower shoulder straight through the perineal body, and perhaps makes a rupture clear through into the rectum. An internal parting of the mucous membrane of the vagina, or a slight tear, is often thus converted into an extensive laceration. The matter of preventing tears is certainly not complete without regarding the shoulder as a pretty frequent cause and directing some attention toward preventing the continuity of the perineal body being dissolved by it. If the head has been successfully delivered, it is well to look out for the shoulder.

The indications to be met in accomplishing the safe birth of the shoulders are these:

1. Direct the body upward into the axis of the outlet.
2. Lessen the transverse diameter of the body of the child.
3. Cause the exit of the body to take place slowly and gently.

When the mother is lying in the dorsal position the weight of the child's head, after it has emerged from the

vagina, tends to drag the body downward and outward through the perineum, instead of outward, upward, and past it, as it should go. So the head ought to be supported, and the body directed upward in its outward passage. The transverse diameter of the body of the child may be easily lessened to a considerable extent by pressing upon the perineum and driving the upper shoulder against the pubic bone, thus doubling both shoulders over the chest.

The slow exit of the body may be brought about by pressing upon the head and retarding its motion during the pain that expels the body. But the pain that brings the body is usually a pretty violent one, and the movements of the neck prevent perfect control being obtained of the child, and notwithstanding all these precautionary measures the slippery parts are likely to get from under the hand, and the damage is done in spite of all efforts. After delivering the head safely, I have been disappointed in the most aggravating way by finding that the shoulder has caused a tear, and have recently dropped into performing a maneuver which might be called the "cork and bottle" maneuver, as its motions are exactly like those undertaken in extracting a cork from a bottle with a corkscrew. I have found it exceedingly useful in extracting the body, after delivering the head with forceps, and in delivering the shoulders when laceration by them seems imminent, either on account of a rigid perineum, a partial parting tear of the fourchette, or the appearance of bright blood on the child's face, denoting an internal parting of the mucous membrane. It fulfils all the indications for safe delivery, and in my hands has been successful in enabling me to avoid tears by the shoulders. The maneuver is carried out as follows: First grasp the child's head by hooking the first and second fingers around the neck and allowing the chin to rest in the palm of the hand (the presentation being normal). Perfect control of both body and head is gained in this way and the child's advance can be either retarded or accelerated at will. With the other hand grasp the bulging perineum and make firm pressure upward, pressing the upper shoulder against the pubic bone, and lessening the transverse diameter of the child's chest. Then delivery may be safely accomplished by pulling upward upon the head in the direction of the outlet, gently and steadily. The whole act may be accomplished in a moment, the usual interval which intervenes between delivery of the head and body allowing ample time for its performance.

#### A CASE ILLUSTRATING THE TREATMENT OF PAINFUL PROLAPSED OVARIES IN YOUNG GIRLS.<sup>1</sup>

BY G. BETTON MASSEY, M.D.,  
OF PHILADELPHIA.

The case that I herewith report is illustrative of the treatment of painful prolapsed ovaries in young girls. The previous history of the case will also suggest a possible way in which vaginal ovaries can become prolapsed and painful without traumatism.

<sup>1</sup> Reported at a meeting of the Philadelphia Obstetrical Society, December 1, 1892.

The patient is a young lady of a sensitive literary family, with an introspective bent. She menstruated early, and, like many young girls, had painful periods. She was ill-developed physically, and the periods were irregular. With the ultra-mechanical ideas of the present, her physician sent her to a surgeon for treatment. The surgeon is said to have diagnosed endometritis and uterine prolapse of moderate degree, and he inserted a pessary. Therein, I am sure, lies the cause of the subsequent prolapse and hyperesthesia of the ovary.

She was sent home, some distance from the office of the surgeon, but the pain was not relieved. Before the pessary had been worn long it was removed by the attending physician, but not before there was aggravation of the preëxisting condition, which I now suppose was one of those minor endometrial catarrhs so common in patients of the class to which the girl belongs. The case went from bad to worse, and there were numerous consultations with physicians and surgeons, and removal of the ovaries and tubes was advised by several.

When seen by me, three years after the inception of the trouble, she was twenty-one years old. The uterus was in a condition of catarrhal inflammation, enlarged and tender. The ovaries (particularly the left) were prolapsed and very tender, although not enlarged. The position and the painful condition of the ovary were, I conceive, the factors that had led so many surgeons to advise the unsexing of this young lady, and according to accepted teachings this advice was warranted. I looked on the case, however, as primarily one of uterine disease, having had added to it the ovarian trouble and the general neurasthenia from which she suffered.

In brief, this patient was placed on electric treatment and rest for the neurasthenia, and was subjected to vaginal treatment by the galvanic current with a covered positive electrode. Great amelioration of the tenderness of the left ovary followed. Up to this time, a period of some weeks, the uterus had not been explored, but owing to the copious catarrhal discharge I thought it well to pass a flexible aseptic sound, which may be done with less danger of injury than if the rigid instrument be used. The uterus was found to be over three inches in depth, showing a source of trouble beyond the ovarian displacement. She was then put on the direct treatment for the endometrial inflammation, intra-uterine galvanic and faradic currents, care being taken not to bruise the sensitive tissues outside of the uterus by any undue movements. From the first internal treatment improvement was noted, the continuous pain in the left ovarian region being somewhat relieved. The following period was much easier, and she went on to a rapid recovery after a treatment of two or three months. She was discharged cured from my sanatorium five months ago, and recent advices state that she is entirely well, natural in her periods, and gaining flesh.

It may be asked: What became of the ovary that was destined to be removed? It still remains somewhat lower than its fellow, but floating freely; and I think that the slight deviation in position will not cause any more trouble than a like freedom of movement in any of the internal organs.

### IRRITATION FROM THE LOCAL USE OF IODOFORM.

BY J. ABBOTT CANTRELL, M.D.,

ADJUNCT PROFESSOR OF DERMATOLOGY IN THE PHILADELPHIA POLYCLINIC; DERMATOLOGIST TO THE PHILADELPHIA HOSPITAL, AND TO ST. AGNES'S HOSPITAL.

THE pain and discomfort following the application of iodoform to raw surfaces has caused me to abandon the use of this agent in this way. I prefer to use one of the blander and less irritating iodine-compounds that have lately been brought forward, such as iodo or aristol. I have lately noticed reports in some of our journals of marked irritating effects from the local employment of iodoform.

Within the past few weeks I have seen several cases in which the effects of this drug have been actually caustic. The two herewith reported are striking examples.

CASE I.—J. M., a male, thirty-three years old, had had an abscess on the outer side of the left leg, about two inches above the malleolus, which was incised and dusted with iodoform and bandaged.

In about five days he presented himself to me with a most painful leg, which upon examination showed an area of ulceration about the size of a silver quarter-dollar at the site of the recently-opened abscess, and surrounding this for a radius of quite three inches was a decidedly irritated and inflamed surface, covered with numerous minute ulcerations, each one of which in itself resembling an ulcer and discharging a small quantity of pus. My first thought was of traumatic erysipelas, when upon careful questioning the facts related were elicited. The temperature at this time was 98.8°.

The man could hardly walk, and the little he did was exceedingly painful.

He was ordered a solution of ichthyol in water (3ij to f 3iv); to be followed in a few days by an ointment containing hydrargyri chloridum mite, gr. xv; unguentum zinci oxidi, 3j, and recovery speedily ensued.

CASE II.—L. B., a male, thirty-two years old, presented himself with a painful patch about four inches in diameter directly over the left patella, stating that he had fallen and bruised the parts, causing an abrasion of the skin. He was advised by his family to dust the parts with iodoform, and in addition he covered them with a zinc ointment. In about three days his knee was greatly swollen and highly inflamed, the whole patch being covered with a number of minute ulcerations, similar to those mentioned in the other case. The man presented himself after a severe drenching in the rain, and the appearances were more decidedly erysipelatous than in the first case. There was no elevation of temperature.

The man was given an ichthyol lotion, followed in a few days by the following: Picis liquid., sulphuris sublimat., aa 3ss; ungt. zinci oxidi, 3j, which was applied twice a day. In about two days he was almost well.

Of course, the report of these two cases is not evidence of the absolute inutility of iodoform, but it indicates that we cannot be too careful in its use.

For myself I shall not use it as long as there are other remedies that may produce as good results without unpleasant irritation. I believe that iodo and aristol are the iodine-compounds upon which we can safely depend.



Iodoform has proved itself of great value in antiseptic surgery, but its irritating qualities must not be overlooked.

### LARGE DOSES OF NITRO-GLYCERIN.

BY G. A. HIMMELSBACH, M.D.,

LATE RESIDENT PHYSICIAN, GENERAL HOSPITAL, BUFFALO, N. Y.

THE following report is simply intended to show to what extent a drug-tolerance can be established.

A. L. P., fifty years old, a miller, entered the Buffalo General Hospital February 20, 1892. Until seven years ago he was a strong, vigorous man, when he was seized with sharp pain in the precordial region, lasting but a few seconds. Similar attacks occurred several times during the succeeding two years. The paroxysms then came on at shorter intervals and with increased severity. The case was diagnosticated as one of angina pectoris, and nitro-glycerin was given; gr.  $\frac{1}{100}$  was at first found to be too large, so that gr.  $\frac{1}{100}$  was given. This would lessen the severity of the attack very appreciably, and for a long time the dose was sufficiently large to bring about relief. For five years the attacks continued, and for their relief the man depended solely upon nitro-glycerin, the dosage of course keeping pace with the increased frequency and severity of the paroxysms.

in this condition for one week, when he decided to go home, having acquired the technique of administering the gas. Brandy  $\frac{3}{4}$ ij, several times daily, seemed to be the only means of inducing restful sleep.

Potassium iodide was given, but subsequently withdrawn, on account of diarrhea. Many other remedies strongly recommended for angina pectoris were tried, but proved of little efficacy.

The patient died a week or so after reaching home. No autopsy was permitted.

33 TWELFTH STREET.

## NEW DEVICES.

### COMBINED TONSILLOTOME AND UVULATOME.<sup>1</sup>

BY JOHN L. ANCRUM, M.D.,  
OF CHARLESTON, S. C.

HAVING been long convinced that many cases of post-nasal disease were aggravated, if not primarily caused by scrofulous or other chronic hypertrophy of the tonsils, it has uniformly been my practice for many years to excise them promptly, whenever hypertrophy existed to such degree as to be plainly evident, or in even a minor degree to interfere with the easy and natural breathing of the subject.

FIG. 1.



When I first saw the patient he was having attacks at intervals of from twenty minutes to two hours, and each one seemed to be more intense than the preceding one; each lasted from five to thirty seconds or more. Several times during severe paroxysms a pronounced systolic murmur could be distinctly heard fully four feet from the patient, for a period of from fifteen to thirty seconds, which would gradually become fainter until it could only be heard by auscultation.

During these seven years of suffering the patient had learned to anticipate the paroxysms some two minutes in advance of their onset, when he would resort to nitro-glycerin, which would lessen or dispel the attack like "magic."

The patient informed me that he was in the habit of taking no less than from six to ten gr.  $\frac{1}{100}$  triturations, *ad libitum*, as a prophylactic dose. At times even this amount was not sufficient, from fifteen to twenty being required. I finally substituted gr.  $\frac{1}{50}$  triturations and kept strict account of the number. The total amount taken ranged from eighty to one hundred and ten each day. This gradually increased until he took a total of one hundred and twenty-five gr.  $\frac{1}{50}$  triturations in twenty-two hours; then for the eight succeeding days he took exactly one thousand gr.  $\frac{1}{50}$  triturations, or a total of gr. xx. At about this time Dr. Stockton suggested the use of oxygen. Accordingly, nitrous oxide and oxygen, in the proportion of 1 to 4, were administered at regular intervals and at the approach of a paroxysm. This measure was the most effectual of any yet tried. By this means the glonoin was reduced to a minimum and the patient suffered comparatively little pain. He continued

Early operation in these cases eliminates the only, and, I may say, much magnified danger from hemorrhage, inasmuch as the bloodvessels of the tonsil in its normal condition are largely venous, and the arterial vessels very small and limited. We thus anticipate their possible enlargement, which, except in constitutional bleeders, is a minor consideration, as they never enlarge to any appreciable or dangerous extent.

While the numerous tonsillotomes now in use are ingenious in construction, and fairly efficient, they all retain the two objectionable features in the compulsory use of both hands in manipulating them, and the additional difficulty in the short fulcrum and long leverage of keeping them with certainty in any fixed position when the knife is being drawn. This has induced me to combine some of the several original designs into a single-handed instrument, uniting the qualities of a tonsillotome and uvulatomer in one, as nearly perfect as it is possible to be, thanks to the skill and workmanship of Messrs. Tiemann & Co., of New York.

As will be seen by reference to the drawing (Fig. 1) the instrument has a concealed spring within the rubber handle; the knife, when brought into position for operation by pressure upon the bulb, closes the spring down and is held by an automatic catch. The tonsil being surrounded by the loop, the dart (which is intended to prevent the excised portion from falling into the larynx) is quickly pushed down by the thumb-piece, and, upon reaching the proper point releases the catch, when the knife flies upward instantaneously, and

<sup>1</sup> Presented to the South Carolina Medical Society.

painlessly removes the tonsil, the patient scarcely realizing that the operation is done.

By the local application of a solution of cocaine the excision is so entirely painless that, practically, nervous persons (who furnish the most numerous subjects) can be deceived by the idea that no cutting has been done, and the opposite tonsil can be removed under the deception, when, otherwise, as often happens on the use of other instruments, it is not easy, or even possible, to persuade them to have the operation repeated.

By a simple device the same instrument is converted into a uvulotome of equal efficiency (Fig. 2); a light

FIG. 2.



metal disc is slid upon the dart; the edematous or elongated uvula is allowed to fall into the opening, and the dart, being pressed forward, carries the disc into the uvula before it until sufficient resistance is offered, when it stops and holds the uvula steadily while the dart passes onward through the uvula and releases the knife as before, and instantaneously excises as much or as little as the surgeon chooses to have passed the dart through.

#### ALUMINUM WIRE PESSARIES. (WOOL-WRAPPED).

BY J. M. KEATING, M.D.,  
OF COLORADO SPRINGS.

WHATEVER may be the opinion of some extreme gynecologists, probably the pessary, in some form or another, will continue to be used with success by the majority of medical practitioners who see much of the diseases of women. Those who are looking over medical literature every week, of course, note the opinions expressed by many extremists, and it is possibly well that such views should be made public, in order that the majority may be able to steer clear of them—in the middle of the stream. The objectionable features of the pessary and its application, in the hands of those who are ignorant or careless, have led many to condemn it entirely, and all sorts of surgical procedures, which are not applicable to the majority of patients, have been suggested to take its place. A well-applied pessary, which is constantly looked after, is a great comfort, and, in fact, a curative agent in a large proportion of cases; but one would no more think of putting a splint on a fractured or lame leg and forgetting it, than to introduce a pessary and forget it. It is not simply intended as a support, or an ornament, but it has an actual curative value in proportion to the amount of brains that is used in its adaptation.

The ordinary hard-rubber pessary has the same disadvantages that a ready-made suit of clothes or a ready-made shoe has, *viz.*, that it rarely suits the case. Then, even if it does suit, at some time, within a few days or weeks, its shape has to be changed, to conform to the new state of affairs. This is a very simple matter when there are instrument-makers close at hand, and, indeed,

with an alcohol lamp or boiling water it is not so very difficult anywhere. Nevertheless, I have often been puzzled to know how to arrange the pessary so as to get all of the benefit from it, and recently the thought occurred to me, which I think may be of use to my fellow-practitioners, to have rings of various sizes made of *aluminium wire*, stiff enough to be of service and yet not too stiff to be difficult to shape.

The wire that I use is about the size of a lead in an ordinary lead-pencil. The rings can be made very easily by oneself with an ordinary pair of strong pincers. The sizes that I have found available are two and a half and three inches in diameter. These are wrapped with wool, so as to be about the thickness of one's little finger, and have a silk ligature tied at one end, and are left hanging as in the case of an ordinary tampon. This is a tell-tale which shows that the instrument is *in situ*. These wool-wrapped pessaries can now be shaped into any form and will retain their position. If they are soaked in a solution of four to one thousand mercuric chloride and then dried, they are ready for use. When introduced into the vagina, they can be very easily shaped by placing two fingers in the opposite way and pulling and pressing as desired. After the pessary has been subjected to the sublimate solution and dried, before placing it I usually soak the wool with the ordinary solution made by dissolving one of Seiler's antiseptic tablets in water. This wool, so subjected, I find can easily remain four days in a case in which there is some leucorrhea. If there is very little vaginal discharge, I think we could safely leave one of these pessaries in position a week. In using tampons I invariably apply them in my office and pack the uterus to get it into position; I use these pessaries in the same way. I then request the patient to return at the end of a stated time, and I withdraw the packing myself, thoroughly cleanse the parts, and introduce another. By placing the pessary in the flame, of course the wool is burned off, and the wire is ready to be used over again. The pessaries are very easily made by oneself; but if one does not care for the trouble, they can be had of E. A. Yarnall Co., of Philadelphia, who have made them up for me. I may say that I always use wool at the present day instead of cotton, as it is elastic, and, in fact, is the only thing that is of any use; it needs thorough greasing before it is introduced, as otherwise it is likely to irritate.

#### A NEW INSTRUMENT FOR THE TREATMENT OF URETHRITIS.

BY J. W. WILLIAMS, A.M., M.D.,  
OF PATERSON, N. J.

IN the treatment of urethritis, particularly in the chronic stages of the disease, the beneficial effects of dilatation by sounds is well known, both in hastening the cure of the inflammation, and, what is even more important, favoring the absorption of those transient stenoses of the canal, which, if left to themselves, might become true strictures.

Neither is there any doubt as to the value of thorough irrigation of the urethra with warm water, or a solution adapted to the needs of the case.

In order to carry out these two indications conve-

niently and thoroughly I have devised the instrument here illustrated, made by Tiemann & Co., of New York:

The instrument consists of a straight metal tube, six inches long, and fourteen (French scale) in caliber. At one extremity is an enlargement, over which a rubber tube may be fitted to attach it to a syringe. At the other extremity is a "female" screw for attaching the heads of the instrument. These heads are the important and characteristic feature of the instrument.

They are practically short sounds of the shape shown in the cut. They are five in number, ranging in size from eighteen to twenty-nine, French scale. Each head is an inch and a half in length, and provided with a short

quite severely. There was no other history of injury. Shortly after this, a swelling on the left temple was noticed for the first time, the patient himself, however, stating that it had been there before the fall. At about the same time marked failure of vision was observed. The patient was also troubled by a turning in of the left eye. There was no history of hemianopsia. For a month the man had what he designated as fainting spells, in which there were no convulsive movements. For a year he had had a good deal of headache of a severe character, chiefly referred to the forehead, extending through the temples, and often radiating back as far as the occiput. There had never been vomiting. Memory had failed



"male" screw for attaching it to the handle. The base of the head is bored for a short distance, so as to be continuous with the bore of the handle. Communicating with the interior of the head and opening around its base are four apertures, directed backward, so as to give a reflux current when fluid is passed through the tube.

The manner of using the instrument is obvious and needs no explanation. I might state, however, that, in addition to plain warm water, I have found the following solutions particularly useful in treatment:

1. A 1:10,000 solution of potassium permanganate.
2. A solution of a teaspoonful of common table salt in a quart of warm water.
3. Thiersch's solution.

Use a fountain syringe and plenty of the solution. The instrument is not to be used until the first, acute stage of the disease has passed, during that time injection of warm water in the usual way with a blunt-nozzled syringe being practised. For irrigation of the deeper portions of the urethra I prefer simply a small-sized soft-rubber catheter—that is, when such a procedure becomes necessary.

The advantages I claim for this instrument (which I have termed an "Irrigating Sound") over other more elaborate forms are the small amount of pain, if any, caused by its introduction; the free flow of the fluid used; its simplicity; and the thoroughness with which it carries out its two objects—dilatation and irrigation. I have had good results from its use, and would recommend it to the profession.

## MEDICAL PROGRESS.

**Successful Removal of a Tumor of the Left Frontal Lobe.**—At a recent meeting of the New York Neurological Society, DR. ARTHUR BOOTH reported the case of an unmarried male, twenty-four years old, who had had hip-joint trouble from childhood, but for eighteen months had had epileptic attacks, general in character. There was no history of an attack of hemi-spasm, or any spasm limited to a single group of muscles, although it was thought that the jerking was most marked in the right arm. In the last seizure, six months before coming under observation, the man had fallen, striking the chin and left side of the head

much during the year, so that it became difficult to recall recent events and the names of those with whom the man was well acquainted. There had been a marked change in the man's manner; he had become dull and disinclined to talk. Syphilis was denied. A family history of pulmonary tuberculosis was wanting. The man's manner was quiet; his face rather expressionless. Speech was slow and somewhat uncertain, though there was no aphasia. The tongue was protruded straight. There was no decided paresis of the face, but there was a slight loss of expression on the right side. There was paresis of the right external rectus. The pupils were widely dilated; there was no reaction to light or in accommodation. Vision was reduced in both eyes, in the greater degree upon the left. There was bilateral optic neuritis, with numerous small retinal hemorrhages. The station was fairly good with eyes closed; there was no ataxia; the knee-jerks were absent, even with reinforcement. There was no anesthesia or analgesia. The sense of taste was normal. The sense of smell was deficient on the left side. On the left temple, just back of the external angular process of the frontal bone, there was quite a prominent swelling, oval in shape, somewhat tender, pressure on which caused pain, radiating through the head as far back as the occiput. Deep pressure at the base of the tumor disclosed an absence of bone at that point.

The symptoms were considered sufficient to warrant a diagnosis of an intra-cranial tumor in the anterior fossa, in the left frontal lobe, and operation was decided upon. When the tumor was exposed it was found to be covered by a tough, soft, red membrane, containing cheesy material, which was removed with a spoon. The circular opening in the bone was found to be one inch in diameter, and the dura mater enclosed the opening. The opening in the bone was enlarged and the dura mater separated from the roof of the orbit, where the tumor was adherent and had caused absorption of the bone. The dura mater was now opened and the tumor enucleated with the finger. There was no shock following the operation; the patient slept well during the night, and the next day talked as well as before the operation. A week later, examination of the eyes showed extensive hemorrhages occupying the entire right retina and two-thirds of the left. There was no perception of light.



After an interval of ten days sight was suddenly recovered to some extent in the left eye. Six days later the patient had a general epileptic attack, and after this again became blind, and remained so. A later examination of the eyes revealed choked disc in the atrophic stage in both eyes.

**The Relation of Pseudo-diphtheric Angina to Diphtheria.**—BOOKER (*Bulletin of the Johns Hopkins Hospital*, iii, 26, p. 109) records the results of a bacteriologic study of eleven cases of scarlatina, with pseudo-membranous angina; four cases of scarlatina, with redness of the throat, but without pseudo-membrane; one case of pseudo-membranous angina, similar to that of the cases of scarlatina, but without exanthem; two cases of measles, followed by membranous laryngitis, but without visible deposit in the throat; one case of measles, followed by a pseudo-membranous affection of the throat and eyelids; and three of ordinary follicular tonsillitis, without resemblance to either scarlatina or diphtheria. He concludes that the pseudo-membranous affections of the throat that sometimes occur secondarily to scarlatina, measles, and, perhaps, other infectious diseases, often present the clinical features of diphtheria, from which, however, they differ in nature and etiology. The clinical features are not always sufficiently distinctive to differentiate these affections the one from the other. The anatomic changes induced by the activity of the bacillus of diphtheria appear to be characteristic, and unlike those present in the pseudo-diphtheric processes. Excepting the false membrane, the anatomic changes found in diphtheria are dependent not upon the direct action of the bacilli, but upon a toxic substance to which they give rise. These changes are characterized especially by focal necrosis of tissues, with a peculiar splitting of the nuclei of the cells. The anatomic changes that attend the pseudo-membranous angina of scarlatina are accompanied with an invasion of streptococci, with suppurative processes. The etiologic factor furnishes a certain criterion for the differentiation of diphtheric and pseudo-diphtheric processes, but the diagnosis is, nevertheless, sometimes difficult. Measles and scarlatina render the tissues especially vulnerable to the bacillus of diphtheria. The constant presence of streptococci in pseudo-diphtheric processes is suggestive of an etiologic connection. The streptococci have not been differentiated, and it is presumed that different forms may occur. The relation of streptococci-infection to scarlatinal pseudo-membranous angina has no bearing upon the specific etiology of scarlatina.

**Unique Fracture of the Pelvis.**—NEUGEBAUER (*Centralbl. f. Gynäkologie*, 1892, No. 47, p. 913) reports the case of a strong, robust woman, twenty years old, who had been married three years, and had borne three children. Fourteen weeks after the birth of the last child, while out riding, the horses became frightened. In the hope of saving her child the mother threw it from her, but in the act lost her balance, and, falling between the horses, was run over by two of the wheels. A considerable time elapsed before professional aid could be brought; and the exact extent of the mother's injuries could not be learned. The child was killed. The woman convalesced after a stay of six weeks in bed.

No information could be obtained concerning hemorrhage from the bladder, bowel, or vagina, and fever and suppuration. The woman only recalled that she at first suffered from severe pains, and for four weeks was entirely unable to move in bed, and passed urine and feces involuntarily. Walking was at first difficult, but gradually improved. Menstruation occurred a week after the accident, but was subsequently absent, the woman becoming pregnant. Examined in the third month of pregnancy, the gait was found to be pretty steady; the upper part of the body was held unusually erect; the pelvic obliquity was diminished; the pelvis was funnel-shaped. Vaginal examination disclosed the existence of a fracture of the horizontal and oblique branches of both pubic bones, with considerable separation of the fragments upon the left and union by callus upon the right. The fragments of bone to the left of the symphysis could be seen and felt to alternately rise and fall when the woman walked or raised her legs. Although the sacro-iliac articulations could not be examined, it is thought that they must have been injured, thus allowing of increased mobility.

**Puerperal Neuritis.**—MÖBIUS (*Münchener medicin. Wochenschr.*, 1892, No. 45, p. 799) has reported the case of a woman, twenty-nine years old, in which, two days after arising from bed, three weeks after the birth of a child, a sense of painful cramp appeared in the calf of the left leg. This kept the patient abed for three weeks, at the end of which time some enfeeblement of movement in the forearms manifested itself. A few days later there was complaint of pain in the scapular regions, which lasted for a week. Then in the ninth week, peculiar sensations in the right forearm were perceived; and the act of writing could not be performed, because the thumb failed to firmly grasp the pen. The flexor longus pollicis was wasted and presented reactions of degeneration. Electric treatment was followed by little improvement.

In a second case, a woman, fifty-five years old, complained of pain at the right elbow, which readily yielded to ordinary measures. Examination, however, disclosed the existence of atrophy of the ulnar and thenar muscles that had been present for thirteen years, following shortly after a labor. Motility was not materially impaired and the electric reactions were preserved.

Both cases are considered to be instances of neuritis of puerperal origin.

**Resection of a Ureter.**—KÜSTER (*Archiv f. klin. Chir.*, 1892, xlii, 4, p. 850) has reported the case of a boy, eleven years old, whose parents had for a long time noticed tumefaction of the abdomen, which examination disclosed to be dependent upon the existence of a left-sided hydronephrosis. An incision was made in the loin and a pelvic fistula established. It became evident that the right kidney was wanting. The lad recovered speedily from the operation, the fistula persisting, and no urine passing through the bladder. Some two years later, the fistulous opening was enlarged, when it was found that the ureter below the artificial opening in it was obstructed by an impermeable stricture. The ureter was cut through just below the stricture and also at its entrance into the pelvis. The lower portion was freed

and brought up into the capsule of the kidney, where it was sutured, the upper extremity being slit vertically, so as to form a funnel-shaped receptacle. On the day after the operation urine began to be passed by the bladder. The fistulous opening was finally closed by freshening its surfaces and introducing a series of graduated sutures. Recovery was eventually complete.

**The Position of the Tongue in Peripheral Palsy of the Facial Nerve.**—HITZIG (*Berliner klin. Wochenschr.*, 1892, No. 50, p. 1270) points out the disparity in the views of various authorities as to the position of the tongue in cases of peripheral palsy of the facial nerve. Some maintain that there is only an apparent deviation; while some describe a deviation to one side, and others a deviation to the opposite side. In some cases there have, doubtless, been mistakes in observation. In mild cases of peripheral palsy there is no deviation at all; while in the severe cases it is the rule for the tongue to be thrust out toward the unparalyzed side. This, however, is not the result of any palsy, but of a spontaneous tendency on the part of the tongue to avoid the angles of the mouth, so that it finds its way to the middle of the oral orifice. In proof of this fact the organ will be seen to follow the paralyzed side of the mouth if this be drawn with the finger to the paralyzed side of the face.

**Pulmonary Embolism from Mercurial Injections.**—BLASCHKO (*Deutsche medicin. Wochenschr.*, 1892, No. 43, p. 965) reports in detail two cases and refers to several others in which the intra-muscular injection of mercuric salicylate in liquid paraffin in the treatment of syphilis was followed by pleuritic pain in the side, dyspnea, cough, blood-streaked expectoration, impairment of the pulmonary percussion-resonance, with the presence of moist râles on auscultation—symptoms that he ascribes to the entrance of minute quantities of paraffin, or of the insoluble mercurial salt into a vein and thence into a pulmonary vessel in which it becomes obstructed. In otherwise healthy persons the complication is attended with no serious results, but in tuberculous persons the consequences might prove injurious.

## THERAPEUTIC NOTES.

**Injections of Lactic Acid in the Treatment of Malignant Growths.**—INGALS (*N. Y. Med. Journ.*, lvi, 24, p. 652) has reported the case of a man, fifty-nine years old, who for a year had been annoyed by the accumulation of an excessive amount of mucus in the throat and a sensation of unusual enlargement that interfered with deglutition, which for six months had been progressive. Eighteen pounds in flesh had been lost. The right tonsil was found increased in size to a diameter of an inch and a half, some thickening extending to the anterior pillar of the fauces and the uvula. The cervical lymphatic glands were not involved. A diagnosis of sarcoma was made and the tonsil was removed by means of the steel-wire écraseur; the thickened uvula was also removed. The wound healed in the course of three or four weeks, except in an area about a quarter of an inch in diameter. New deposits had, however, taken place

at the site of the tonsil, giving rise to a tumor about half an inch in diameter and a quarter of an inch in thickness. Applications of a 60 per cent. solution of lactic acid were now begun, and a weak solution of carbolic acid was prescribed as a gargle. The appearance of the ulcerated area improved materially, but thickening was now noticed on the right side of the pharynx behind the posterior pillar, rapidly increasing in size until it attained a thickness of a third of an inch, a width of two-fifths of an inch, and a length of a little more than an inch. The man suffered from severe neuralgic pains, radiating from the tumor to the ear and side of the neck. As this mass could not be removed, it was injected with five minims of a 20 per cent. solution of lactic acid. Profuse bleeding followed each injection. The strength of the solution was gradually increased to 60 per cent., but it was found that from 8 to 10 minims of a 50 per cent. solution, injected in one or two places about three times a week, answered the best purpose. Nevertheless, the growth exceeded the reduction brought about by treatment, but its progress was manifestly modified favorably. The bleeding that at first accompanied the injections no longer occurred after a time. The injections were always made deeply into the tissues, and at times occasioned considerable pain. The general health and strength of the patient remained fairly good. On a few occasions a small quantity of cocaine has been added to the injections. The injection was followed by a spray containing morphine, gr. iv; carbolic acid and tannic acid, each gr. xxx; and glycerin and water, each f 3iv.

**For Hemorrhoids.**—External hemorrhoids are first washed with an aseptic lotion, and an application of the following ointment is made three or four times a day:

R.—Iodoformi . . . . gr. v.  
Ext. belladonnæ . . . . gr. x.  
Chrysarobin. . . . gr. xv.  
Vaselin. . . . 3j.—M.

Internal hemorrhoids are treated with suppositories, each containing:

R.—Ext. belladonnæ . . . . gr. ½.  
Iodoformi . . . . gr. ⅓.  
Chrysarobin. . . . gr. j.  
Ol. theobromæ . . . . 3ss.  
Glycerini . . . . q. s.

KOSSOBUDSKI, *Wien. Med. Pr.*, 1892, No. 47.

**Antipyrin-poisoning.**—GUTTMANN (*Ther. Monatsh.*, Oct., 1892; *Brit. Med. Journ.*, No. 1665, Epitome, p. 87) has reported the case of a man who had taken one hundred and fifty grains of antipyrin in ten-grain doses twice a day. The first doses were followed by vertigo and impairment of vision. Then symptoms resembling those of the algid stage of cholera developed. The condition was one of collapse, with coldness of the extremities, hoarseness of voice and sunken eyes. The radial pulse could not be felt, and the temperature was 94.1°. The stools were solid; there was a deep rose-red rash upon the trunk. The man answered questions slowly, complaining of headache and noises in the ears. At times he could not see, but at others he would see two, three, or four inverted images.

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SATURDAY, JANUARY 7, 1893.

### SPOROZOA AND THEIR RELATION TO CARCINOMA.

THERE is probably no line of recent foreign investigation the results of which will be awaited with greater interest by American physicians than those of the experiments now being carried out in the various parts of Europe on the minute organisms that have been found in the cells of nearly all carcinomatous growths, and the abundance of which appears at least to hold a direct relation to the malignancy of the growth.

The term Sporozoa<sup>1</sup> was introduced by RUDOLPH LEUCKART to distinguish certain low protistan organisms frequently found parasitic in man and other vertebrate animals from the Gregarines, which may readily be found crowding the viscera of arthropods and worms (*e. g.*, the proventriculus of grasshoppers and crickets), and which they resemble in producing hard-shelled germs (spores). The sporozoa (*coccidia*) have long been recognized in the intestinal tract and skin of man and the lower animals; they have been found in the muscles (*sarcosporidia*—*sarcocystis hominis*)<sup>2</sup> and in the blood of man<sup>3</sup> and

animals,<sup>1</sup> in molluscum contagiosum,<sup>2</sup> and in malignant papillary dermatitis (Paget's disease).<sup>3</sup>

As far back as 1847, R. VIRCHOW noticed certain enclosures within carcinoma-cells,<sup>4</sup> which he attributed to degenerative processes, and it was not until 1888 that the true character of these intra-cellular bodies was suggested.<sup>5</sup> During the four years that have elapsed since this announcement, specimens from over two hundred and fifty cases of carcinoma have been carefully examined, and the opinion of PFEIFFER and NEISSER fully confirmed.

Much discussion has arisen over the exact relation of the sporozoa to the diseased condition with which they are associated, but by far the most interesting and valuable recent contribution is that of W. PODWYSOZKI and J. SAWTSCHENKO,<sup>6</sup> of Kiev, who preface their paper, entitled "Parasitism in Carcinoma, and a Description of the Sporozoa Parasitic in Carcinomatous Tumors," with an interesting and exhaustive review of previous work in the same field, accompanied by a bibliography of the subject. The first description of protozoa-like parasites in carcinoma-cells was made, as we have already remarked, by L. PFEIFFER, of Jena, in 1888, who found in the epithelial cells of a fresh, warm, melanotic carcinoma, certain organisms the developmental stages of which resembled very closely spore-formation, as seen in the microsporidia (*Plasmodiophora brassica*, or *Synchytrium mercurialis*). PFEIFFER's observations were soon followed up by ALBARAN<sup>7</sup> and THOMA.<sup>8</sup> Further investigation has since led PFEIFFER<sup>9</sup> not only to class these parasites with the sporozoa, but to the belief that the various forms of carcinomata will prove to be accompanied by different species of sporozoa.

PFEIFFER's investigations were followed by NIL SJÖBRING,<sup>10</sup> of Lund, by VAN HEUKELOM,<sup>11</sup> of Leyden,

<sup>1</sup> Danilewsky: "Contributions à l'Etude de la Microbiose Malarique," Annales de l'Institut Pasteur, 1891, No. 12, p. 578.

<sup>2</sup> Pfeiffer: Zeitschr. f. Hygiene, 1888; Neisser: Vierteljahresschrift f. Dermatologie, 1888, Bd. xv.

<sup>3</sup> Darier: Annales de Dermatologie et de Syph., 1889, No. 7. Torök and Tommasoli: Monatshefte f. Dermatol., 1890.

<sup>4</sup> See ref. in Kossinsky: Ueber Physaliphoren in der Krebsgeschwulsten, Warsaw, 1890.

<sup>5</sup> L. Pfeiffer: Correspondenzblätter des allg. ärztlich. Vereins von Thüringen, 1888, No. 2; Zeitschr. f. Hygiene, Bd. iv; Neisser: Vierteljahresschrift f. Dermatologie, 1888, Bd. xv.

<sup>6</sup> Centralbl. f. Bakteriöl. und Parasitenkunde, April 23, 1892.

<sup>7</sup> Bull. Méd., April 10, 1889.

<sup>8</sup> Fortschritte der Med., June 1, 1889.

<sup>9</sup> Die Protozoen als Krankheitserreger, Jena, 1891.

<sup>10</sup> Fortschritte der Med., July 15, 1890.

<sup>11</sup> Centralbl. für allgem. Pathol., 1890, No. 22.

<sup>1</sup> See Davaine: Leçons sur les Sporozoaires. Paris, 1884.

<sup>2</sup> Rosenberg: "Ein Fund von Psorospermien (Sarcosporidien) im Herzmuskel des Menschen," Zeitschr. f. Hygiene, Bd. xi, No. 3.

<sup>3</sup> A. Laveran: De Paludisme et de son Hematozoaire. 8vo, 300 pp. Paris: G. Masson, 1891.



and AUG. KOSSINSKY, of Warsaw.<sup>1</sup> SJÖBRING found the parasitic sporozoa in eight cases, VAN HEUKELOM in nearly two hundred, and KOSSINSKY in ten cases. All of these investigators found the parasites most abundant in carcinoma of the breast, but at the same time demonstrated their presence in other forms. SJÖBRING agrees with PFEIFFER in classing the parasites among the microsporidia, and finds in them much resemblance to the parasites producing pebrine in silkworms, the discovery of which did so much to make Pasteur famous.

MICHAUD,<sup>2</sup> VINCENT,<sup>3</sup> and MALASSEZ<sup>4</sup> take sides with the aforementioned authors, while RAMSEY WRIGHT<sup>5</sup> and RUSSEL,<sup>6</sup> of England, oppose their views, and refer the bodies observed to the saccharomyces (Sprosspilze of the Germans), and the last writer claims to have found certain granules in the protoplasm of carcinoma cells, which, being fuchsinophile, he calls "fuchsin-bodies," and these he compares with the so-called "Altmann's granules," found not only in pathologic but in normal cells. KLEBS,<sup>7</sup> FIRKET,<sup>8</sup> BORRELL,<sup>9</sup> and SCHÜTZ,<sup>10</sup> all oppose the parasitic nature of the described cell-enclosures. Some consider them to be included leukocytes, or, perhaps, red blood-corpuscles; others, a product of a hyaline or horny metamorphosis of the cell-protoplasm. FABER DOMERGUE<sup>11</sup> sees in the so-called sporozoa inside the carcinomatous cells nothing more than was seen by VIRCHOW forty-five years ago, *i. e.*, degeneration-products of the epithelial cells themselves, while CORNIL<sup>12</sup> and HANSEMAN<sup>13</sup> see a possibility of mistaking various stages of karyokinetic cell-division for the sporozoa and their sporocysts. STROEBE<sup>14</sup> and STEINHAUS<sup>15</sup> admit the sporozoan nature of the bodies found in the cells, but oppose the idea that they have aught to do with the etiology of carcinoma. SUDAKIEWITSCH,<sup>16</sup> as the result of the examination of sixty cases of

different kinds, decides that "a carcinomatous growth of glandular epithelium in man, as well as in other animals, may follow the immigration of parasites belonging to the sporozoa." It will be seen that the subject had already received considerable attention when PODWYSSOZKI and SAWTSCHENKO began their investigations. After the study of the intra-cellular sporozoa in more than twenty cases of carcinomatous growths in various organs—testicle, skin, lip, breast, stomach—these writers assert "that the more evident the intensity of the carcinomatous growth, the more numerous the parasites in the cells; the spongier the growth and the greater the tendency to break down, the greater the number of sporozoa in the cells. The parasites were found most plentifully in medullary growths, and especially in primary and recurrent carcinoma of the breast. In cancrroids of the lips and eyelids they were only sparsely present.

In order to study the parasitic sporozoa to the best advantage, pieces of the freshly excised carcinoma should be hardened in Flemming's fluid, the longer the better, then stained with safranin-anilin water, and washed in alcohol to which a few drops of picric acid have been added. The sporozoa are located either inside the cells or in the lymph-spaces between them. The parasites consist of spherical mother-cysts, containing falciform or semilunar embryos—characteristic of the sporozoa. Escaping from the mother-cyst, the embryos become disseminated, pass into the lymph-spaces, possibly into the capillaries, and into neighboring cells. That the bodies found in carcinomatous cells are sporozoa, and that they are parasitic, PODWYSSOZKI and SAWTSCHENKO hold to be demonstrated; they also favor PFEIFFER's view that different parasites exist in connection with different varieties of carcinoma. The authors do not proffer any conclusion as to the relation of the parasites to the etiology of the disease—a question that remains to be investigated by the inoculation of animals with pure cultures of the parasites obtained from carcinoma, which has not yet been satisfactorily accomplished.<sup>1</sup> They, however, regard it as probable that the sporozoa exhibit here only an illustration of commensalism or symbiosis with epithelial cells. RIBBERT<sup>2</sup> opposes the parasitic nature of the en-

<sup>1</sup> Loc. cit.

<sup>2</sup> Semaine méd., 1889, No. 29.

<sup>3</sup> Annales de Micrographie, Dec., 1890.

<sup>4</sup> Archiv de Méd. expérimentale, 1890, vol. ii.

<sup>5</sup> Centralbl. f. allg. Pathol., 1890, No. 11.

<sup>6</sup> The British Med. Journ., 1890.

<sup>7</sup> Deutsche med. Wochenschr., 1890, No. 32.

<sup>8</sup> Centralbl. f. allg. Pathol., 1890, No. 20.

<sup>9</sup> Archiv de Méd. expér., 1890, vol. ii.

<sup>10</sup> Münch. med. Wochenschr., 1890, No. 35.

<sup>11</sup> Semaine Méd., 1891, No. 19.

<sup>12</sup> Journ. de l' Anat. et de Phys., 1891, No. 1.

<sup>13</sup> Virchow's Arch., 1890.

<sup>14</sup> Ziegler's Beiträge, 1891, Bd. xi, H. 1.

<sup>15</sup> Centralbl. für allgem. Pathol., 1891, No. 2; Virchow's Arch., 1891, Bd. cxxvi.

<sup>16</sup> Vratsch, 1891, No. 49.

<sup>1</sup> Sheridan Delepine: "Cultures of Psorosperms," Brit. Med. Journ., May, 1891.

<sup>2</sup> Deutsche med. Wochenschr., 1891, No. 42; Centralbl. f. Bakter. u. Parasitenk., Oct. 7, 1892.

closures observed in the cells of carcinomata, holding that they are but degeneration-products of the epithelial cells or their nuclei. P. FOÀ, of Turin,<sup>1</sup> declines to accept many of SOUDAKEWITSCH's figures as those of parasites, and he also holds that the so-called parasites of STROEBE and PODWYSOZKI are found in non-carcinomatous tissues, and in those not of a new growth, and that they have to do with cell-development. FOÀ then describes and figures bodies that he finds in carcinoma of the breast and axillary glands, and that he considers without doubt to be parasites, but he also believes them to hold but a casual relation to the disease. To the criticisms of FOÀ, PODWYSOZKI<sup>2</sup> replies that he has been incorrectly quoted, and that unwarranted inferences have been drawn from some of his statements, which seems to be the case.

We admire the conservative and cautious spirit evinced by the investigators of this important question thus far in declining to make any claim for the specific relation of the sporozoa to carcinoma; probably they, along with many others, have taken lesson from the battlefield of bacteriology, strewn with the lifeless remains of innumerable hasty hypotheses and specific germs.

There are one or two points that seem thus far to have escaped the attention of writers on this question. First, the allowance that must be made for certain tendencies toward growth or change recognized by students of variation and other questions of evolution, and which cannot be explained by environment. In the normal fulfilment of function certain organs begin at given periods of life to enlarge and become active, if for any reason, such as failure to marry, normal development is hindered, and we find the organ, urged on by this inherited tendency to change within a certain stage of life, taking on an abnormal growth. The statistics of carcinomata among women show that in about 70 per cent. of the cases the disease is located in the organs of generation—most frequently in the breast. In the majority of these cases, again, the patients are either unmarried or, if married, have never borne children, or so few as to fail to satisfy the normal tendency to activity in the organs concerned. Again, it must be borne in mind that carcinoma is one of the diseases that shows well-marked geographical distribution, being found more

frequently among country people and in certain localities, than among inhabitants of cities and in other localities. These considerations enjoin investigators to great caution in throwing the responsibility of the disease on organisms of which so little is known as of the sporozoa.

#### THE NECESSITY OF THE RESTRICTION OF IMMIGRATION.

If the press is to be taken as the exponent of popular sentiment, it would seem to be settled that immigration will be interdicted for the next twelve months. This sentiment is in a measure founded upon the expression of medical opinion, which is based on the belief that the greatest danger of importation of Asiatic cholera is through the immigrant-class and their baggage and personal effects. There are other reasons, practical and non-medical, why immigration should be restricted, and there are opposing arguments against restriction, but with these we have nothing to do in considering the subject from a medical and precautionary standpoint.

Judging from the history of epidemics of cholera in Europe, and the numerous scattered places on the Continent at which cholera still exists and has existed with a tendency even now to recrudescence, it is extremely probable that under favorable conditions later in the year, the disease will become more widespread and epidemic, and finally reach the United States. There seems to be a parallel between the conditions and the course of the disease in the years 1865 and 1866, and those of 1892 and 1893. Extraordinary measures will be required to protect the United States from the introduction of the disease during the coming spring and summer.

It is a fact substantiated by past experience that the greatest danger springs from the inflow of the immigrant-class and the fomites of disease concealed in their baggage and personal effects; and it stands to reason that if immigration were temporarily suspended, the problem of preventing a visitation of cholera would be greatly lessened, if not solved. It is a question whether the same end might not be accomplished without resort to so radical a measure. The English practice, which has yielded such favorable results, might be cited as a reason for hesitating before adopting so unusual and stringent a measure as exclusion; but the conditions in England and in the United States are quite dissimilar. In England, under the Local Govern-

<sup>1</sup> Centralbl. f. Bakter. u. Parasitenk., Aug. 9, 1892.

<sup>2</sup> Ibid., Oct. 19, 1892.

ment Board, sanitary law and sanitary administration are made applicable to every part of the realm, and local sanitation is brought to a high degree of efficiency. Therefore, on account of this comprehensive system of local sanitation and the state of preparedness to meet and cope with disease, quarantine is limited to inspection and the isolation of the sick, with little interference with commerce and without the necessity of restricting immigration.

It is far different in this country. We are not yet prepared to throw down the barriers of quarantine, because our internal sanitary administration is only exceptionally adapted to meet the emergency, in the vast majority of places being neglected or only in its developmental stage. We are, however, making rapid strides in matters of sanitation, and may at no distant day catch up with England; but for the present, at least, it would be foolhardy to imitate England's practices without the facilities to carry out her sanitary methods.

If our quarantine defences were uniform, complete, and in the highest stage of efficiency, there would be less justification for a temporary suspension of immigration; but such, unfortunately, is not the case. Quarantine is in the transition-stage of administration. It is by no means certain what will be the issue of the discussion of the various proposed systems now before Congress; but this much is certain, that whether a National quarantine system shall be adopted or the local quarantines be continued and supplemented by Government aid and supervision, a considerable period will elapse before organization and equipment will be completed. This very uncertainty impedes the activity of preparation. Consequently, if the suspension of immigration as a temporary expedient will help materially to prevent our land from the threatened danger—and of this there can be little doubt—by all means let the Government resort to this expedient.

There is another consideration of great weight. This is the year of the Columbian Exposition, and it would be particularly disastrous if, by neglect to lessen the chances of the entrance of cholera, this disease should be introduced the coming spring or summer; but, laying aside this view of the question, if, with the great number of visitors attracted to our shores by the Exposition, immigration remains unrestricted, the immense passenger traffic would greatly enhance the risk of the importation of disease and seriously tax the ability of the quarantine authorities

to meet the emergency, should cholera unfortunately break out.

For the protection of the public health and for the best advantage of the whole country, there seems to be no alternative but to suspend immigration as a temporary expedient made necessary by the existing conditions abroad.

## SELECTION.

### TAX ON QUACKS.

THE recent suggestion of the Secretary of the Treasury that the tax on alcohol be increased fifty cents per gallon, in order to raise more money for the increasing expenses of the Government, seems to have met with a favorable response in some quarters, and the question of tariff and taxation will no doubt be considerably discussed by Congress in the near future.

In this connection, the wisdom of putting a heavy and permanent tax on all forms of nostrums and quackery will at once commend itself to all wise legislators who are working for the public good. A stamp-tax of this kind, say 25 per cent., on every form of secret or proprietary medicinal preparation of any kind, whether sold by the retailer, proprietor, manufacturer, or by advertising quack-specialists, would be no hardship to the public, as it would in nowise affect the retail price of these articles. All such manufacturers could easily afford to give the Government 25 per cent. of the retail price, and still have a very handsome profit left, as their net profit is rarely less than 500 per cent., and often very much more.

Legitimate preparations of the Pharmacopeia and other standard preparations, where the complete working formula is public property, should be exempt. But, as the success of quackery depends on secrecy and mystery, and as these two conditions enable unscrupulous persons to get a dollar for a few cents' worth of a simple remedy, it will be seen that there would be no injustice to anyone if a good fair tax were put on the business.

If the Government went still further, and required all nostrum and secret medicine manufacturers to pay a big license, and place on record open to public inspection a sworn statement of the exact composition, together with a complete working formula of each preparation, much good would result. And if, like insurance companies, they were also required to furnish heavy bonds, or make a special deposit, which could be forfeited under proper restrictions, provided their medicine did not do all that was claimed for it, the public would be still better protected, both in health and pocket, and no injustice would be done to the honest manufacturer of articles of real merit.

There is no good reason why the Government should not place the nostrum business on the same basis in its Internal Revenue Department as the manufacture of whiskey and tobacco. Analyses of these preparations should be made from time to time, and heavy penalties imposed if they vary from the sworn formula on record, or if any dangerous drug like morphine is being used.



England, which is said to be a free-trade country, taxes the nostrum business heavily, and derives a large and growing revenue from that source.—*New York Medical Times*.

## REVIEWS.

AN ILLUSTRATED ENCYCLOPÆDIC MEDICAL DICTIONARY. BEING A DICTIONARY OF THE TECHNICAL TERMS USED BY WRITERS ON MEDICINE AND THE COLLATERAL SCIENCES IN THE RUSSIAN, ENGLISH, FRENCH, AND GERMAN LANGUAGES. By FRANK P. FOSTER, M.D., Assisted by Eleven Collaborators. Volume III. Illustrated. New York: D. Appleton & Co., 1892.

THE third volume of this noble work, in which the medical profession of America takes a just National pride, extends from *Fascia* to *Minjak-lajam*. Praise of such a work is almost or quite superfluous, and criticism worthy of any attention may only be construed as proceeding from a hearty desire to make future volumes, if possible, more perfect. It is plainly impossible to avoid all errors and omissions, and one who has taken a hand even to a small degree in any undertaking similar to that of Dr. Foster and his co-laborers must be most disinclined to find fault.

The limits of our space will allow reference to but a few of the points that might be mentioned. Perhaps the most puzzling inconsistency that appears is the noteworthy lack of uniformity in weights and measures. Turn, for example, to the article *Iodum* or to *Hamelis*. Several different systems are mixed in a sorry jumble that is certainly unscientific and is confusing to the average reader. It would have been better to choose one or even two systems and adhere to them throughout.

In giving the work its encyclopædic character there should have been scrupulous care that the scientific statements are accurate. For instance, by reference to the word *man*, it will be seen what we mean. From the words, *Man is anatomically*, etc., every assertion is either absolutely untrue or open to serious question.

A number of remarkable omissions have struck our attention, especially these: *Fuchsinophile* and *fuchsinophilous*, *globin*, *lactoglobulin* (alluded to under *Milk*), *microphotograph* and *microphotography*, *jack-knife-posture*, *genu-cubital*, *microsarin*, *Gafsa button*, *katabolin*, *metabolin*, *karyokinesis*, *lumbo-colotomy*, *lumbodysnia*, *macrencephalic*, *macrencephalous*, *metopism*, *micrencephalous*, *metrocyte*, *microaudiphone*, *microbicide*, *matoid*, *masochism*, *mesoplast*, *mesopic*, *macromelus*, *maconie* (mentioned under *makiak*), *maidismus*, *macrorrhinia*, *manigraph*, *maritonucleus*, *mestosis*, *microdentism*, *microgyria*, *microsthenic*, *microtomy*, *microtrichia*, *metabolize*, *metapeptone*, *metaplasia*, *metapsychosis*, *metencephalous*, *macrocephalic*, *macromania*, *lymph-angiofibroma*, *lymphadenism*, *luctic*, etc.

The identity of *hollek* and *hollyhock* is not noted. *Garget* is not properly the name of *phytolacca decandra*: the plant is called garget-root because of the vulgar belief that it is a remedy for garget. Moreover, garget is defined as "mammitis in the cow"; popularly it is applied to a similar disease of swine. Originally garget

was a swelling of the throat, a quinsy—a meaning overlooked by Foster.

The interesting etymology of *matsoon* is not given.

There are a great many commensal organisms besides *guest gall-flies* to which biologists apply the term *inquiline*.

Milford Springs is in New Hampshire, not in Massachusetts.

*Marteno*, the popularly perverted form of *martynia*, finds no entry, though in literary use for the past fifty years.

*Glastonbury* is given as a noun, but is it not a short way of saying *Glastonbury thorn*?

But of this lexicon it must not be forgotten that any number of such slips can detract but little from its positive merits, both many and great, and which cannot or need not be mentioned here.

READY REFERENCE HANDBOOK OF DISEASES OF THE SKIN. By GEORGE THOMAS JACKSON, M.D. With fifty illustrations. Pp. 553. Philadelphia: Lea Bros. & Co., 1892.

THE author is favorably known as a worker in the field of dermatology. The volume, as the title implies, is a reference handbook, compiled upon the A B C plan, the diseases being discussed in alphabetical order, without attempt at classification. This we regard as a mistake, for the plan fails to bring together diseases nearly related in their nature. A study of the relation of diseases is a field worthy of careful cultivation. The whole subject of etiology and pathology is thereby elucidated, and, as a practical result, therapeutics is made rational. In the volume before us the aim of the author has been to consider the diseases from the standpoint mainly of symptoms, diagnosis, and treatment, the etiology and pathology receiving only scant consideration.

The subject-matter is condensed, and brevity, both of matter and diction, are notable features. The numerous synonyms of diseases in all the languages figure alphabetically in bold type throughout the pages—too conspicuously we think, for they detract from the importance of the author's own views, and moreover tend to confuse the reader.

The book is intended for the student, and especially for the active practitioner who desires to obtain information with the least possible trouble of reading or time. But the amount of the information is limited in a book of this size, owing to the plan of attempting to cover so large a field. The subject-matter is reliable and may be accepted as embodying the principles of dermatology as practised to-day. The opinions of some of New York's representative dermatologists are frequently quoted. The author's own experience, however, has been large, and his personal observations make the book valuable.

There is on every page an effort to bring the subject up to date, especially as to the value and use of the new remedies. Recently described diseases, such as kraurosis vulvæ, angio-keratoma, erythrasma, pityriasis rubra pilaris, and dermatitis herpetiformis, all receive brief or full description, and give further evidence of the statement already made that the book is up to the times. Dermatology is regarded from a practical view—witness

the chapter, for example, upon "Some Dermatological Don'ts."

There is nothing dangerous in the teaching. The treatment recommended, on the contrary, is conservative, and may in all cases be safely followed. It consists of the remedies and formulæ in general use, together with a sprinkling of the newer drugs and combinations, which, however, the author refers to rather than indorses from his own experience. In some cases his views are decidedly positive. Formulæ abound throughout the pages, and a short formulary selected from favorite authors concludes the volume. Photographs and woodcuts occur here and there, which add to the value of the book.

**TUBERCULOSIS OF BONES AND JOINTS.** By N. SENN, M.D., Ph.D., Professor of Practice of Surgery in Rush Medical College; Professor of Surgery in the Chicago Polyclinic, etc. Illustrated with 107 engravings (seven of them colored). Royal octavo, pp. 520. Philadelphia: The F. A. Davis Co., 1892.

WITHIN the past few years current English and American medical literature has been enriched, in a department which was previously nearly barren, by more or less that is worth reading on the subject of surgical tuberculosis. English writers have, however, by no means kept pace with their Continental colleagues in the appreciation of the immense importance of the subject, or in their contributions to it. Still less have they attracted attention by any original studies, and to the German and French authors we have had to look for most of our information. Quite recently, however, English authors seem to have awakened from their lethargy and to be more active in their recognition of the various tuberculous lesions and more minute and accurate in their description of them.

The present work of Dr. Senn's is most helpful in this direction, and is consequently most welcome. It deals with the whole question of the genesis and pathology of tubercle, of the various fates with which it may meet, and the various sequels of primary tuberculous infection. After devoting seven chapters to the general consideration of the subject, he takes up bone-tuberculosis, to which six chapters are assigned, and then joint and synovial tuberculosis, to which he gives eleven chapters. Among these are included sections on non-operative treatment, including that by tuberculin, and that by intra-articular and parenchymatous injection of iodoform, and of the various other substances which have at various times been recommended. Nearly half of the volume is occupied by a discussion of the disease as manifested in particular bones and joints, and of the operative treatment which should be practised for its relief. This naturally comprehends the topic of joint-resections, those which are now generally practised being described at sufficient length.

Like all of Dr. Senn's work, this book is most carefully prepared, and serves as a complete epitome of the subject. We naturally expect to find frequent mention of the names of Volkmann, König, Kraske, Krause, Schüller, Lannelongue, and Ollier, but the valuable contributions and suggestions of others less well known are not in the least slighted. The observations and facts of all modern writers are orderly arranged, and masterly

tempered or interspersed with the results of the author's ripe knowledge and experience.

We find very little to which we could take exception or which we could wish to amend. Our main criticism is one that must lose much of its force in view of the circumstances under which the book has been produced, namely, that while written by an American, and published at home, it is yet essentially foreign. Such a book could hardly be based on purely domestic studies and observations. The American and English professions have not yet advanced in this particular direction to a point permitting this. Obviously, then, we need just such a work by which all may familiarize themselves with the characteristic lesions and appearances, as well as with the surgical pathology of tuberculosis, and we are really largely in Dr. Senn's debt for the attractive and complete way in which he has performed the task that he has assigned himself. His advice is always sound, and should be closely followed, particularly, *e. g.*, that upon the performance of atypical resections, p. 306, *et seq.* The author may possibly be charged with a certain disregard of American mechanical aids which are certainly superior to the foreign. For example, we would be glad to see some illustrations of the Taylor hip and knee splints, which are superior to all others, and of the Verity suspension apparatus for dressing certain severe cases of resection of the hip, pelvis, and spine. But after all, these are minor omissions, since it is with the pathologic aspects of the general topic that the work is more concerned.

All in all, the work is most valuable, and deserves the most general sale and study.

**HYGIENE AND PUBLIC HEALTH.** By LEWIS C. PARKES, M.D., D.P.H. London University. Third edition, with illustrations. Pp. 523. Philadelphia: P. Blakiston, Son & Co., 1892.

IN the preface to this edition the author calls attention to portions of this book that have been rewritten and brought up to date, especially the article on diphtheria, and the chapters upon etiology and bacteriology in general.

In reading these articles attention is attracted to many statements to which exception can readily be taken. In the chapter headed "The Contagia" there appears the following statement: "With the exception of scarlet fever, relapsing fever, leprosy, suppurative and septic diseases, which rest upon a surer basis, there is still wanting in the case of all these diseases" (reference just having been made to anthrax, tuberculosis, glanders, actinomycosis, diphtheria, croupous pneumonia, enteric fever, etc.) "the complete chain of experimental proof necessary to establish the causal relationship of the organisms which have been described as associated with them."

In the same chapter (p. 412), in referring to the etiology of malaria, mention is made of only the bacillus of Klebs, an organism that is of no more than historic importance, and has nothing whatever to do with the causation of malaria. Nowhere in the book do we find a reference to the work of Laveran, Marchiafava, Celli, Richard, Councilman, Osler, Golgi, and many others, who have practically demonstrated the true nature of

the etiologic factor concerned in the production of this malady.

On the same page we read that Eberth's bacillus of typhoid fever (*enteric fever*, as it appears in the text) is scarcely distinguishable from the common saprophyte, the bacterium termo; this statement is difficult of interpretation, for the reason that the term bacterium termo is now obsolete, and it is hard to say what it did indicate when in use.

The article on enteric fever (p. 445) begins thus: "Typhoid, or enteric fever, *excepting its possible origin from a cow-disease, etc.*" (italics are ours). Under the head Diphtheria we learn that "the etiology of this disease is still to a certain extent veiled in obscurity." On page 222 is quoted the work of Dr. Thompkins, in which it was possible for him to demonstrate in the air of a part of Leicester, England, in which diarrhea was prevalent, a larger proportion of bacteria than in the air of districts not so affected, "and that these same microbes, when cultivated, possessed the power of inducing diarrhea in the human subject." (No reference to the original communication is given.) As is usual in English books, sewer-gas is indicated as being the cause of many diseases, the existence of which cannot be otherwise accounted for. In this work we find it standing either in causal relation or predisposing to diarrhea, typhoid fever, diphtheria, erysipelas, puerperal fever, pyemia, septicemia, hospital gangrene, and Asiatic cholera. On page 219 we learn that long-continued inhalation of diluted sewer-air tends to produce a general loss of health, while two pages further on we are told that men engaged in the occupation of cleaning out sewers become acclimated, so to speak. On page 209 we find that the bacillus of tuberculosis acquires a higher degree of virulence when exposed to the foul air of an overcrowded apartment, than it originally possessed on leaving the lungs of a tuberculous patient.

Space will not permit of a complete analysis of this book. That which is good in it is not new, and much that appears as new cannot, with the best intentions, be accepted as good. After the amount of conscientious labor that has been expended in recent years upon the etiology of infectious diseases, and the conditions that govern their spread, it is certainly depressing to find such statements as those quoted above appearing in a work dated 1892.

**HUMAN EMBRYOLOGY.** By CHARLES SEDGEWICK MINOT, Professor of Histology and Human Embryology, Harvard Medical School, Boston. 815 pp. 463 illustrations. New York: William Wood & Co., 1892.

PROFESSIONAL students of biology have reason to be grateful to Prof. Minot for the massive collation of embryologic data contained in the eight hundred pages of his recent work.

There has been nothing hitherto giving so comprehensive a view of vertebrate embryology, nor any book better adapted to the needs of the lecturer who wishes to brush up his knowledge previous to presenting himself before his class.

The book is evidently based upon the notes and summaries accumulated by the author during the years of his preparation for the chair he now occupies, and fur-

nishes striking evidence of his great erudition in the field of embryologic research. The training of the writer in foreign laboratories appears to have rendered him purblind to the advantages offered by his own native tongue and to any good in the embryologic work of American investigators, himself excepted. One detects a most unpleasant captiousness in many of the references to the embryologic contributions of such well-known American embryologists as Ryder, Brooks, Whitman, Clark, etc. The employment in the text of such terms as Urei, Merit, Aulage, Deckschicht, Tubenleiste, Vorderdarm, Globules tardif, and a hundred other foreign terms, in place of English equivalents, deserves as little commendation as does the author's preference for English, French, and German colloquial terms in place of properly constructed Greek and Latin derivatives. It is scarcely in accord with the rules of modern scientific nomenclature to coin names like the "zones of His," or to perpetuate such as the "Cochin-China canals." As a rule, the style of diction is good, although the lip tends to curl now and then at such conceits as "the problem was fruitful of fruitless speculation." The chapter on "The Theory of Sex," and that on "Heredity," are most interesting reading.

Taken as a whole, the book deserves commendation, and will form a most valuable addition to the library of the medical specialist and the professional naturalist. The busy practitioner and the student with an overcrowded curriculum will scarcely find time for the *pros* and *cons* of the multitude of embryologic hypotheses, and Mr. Minot would place the public under additional obligation if he would sift out, from the tremendous mass of information contained in his book, the established facts and most generally accepted theories of embryology, and present them without discussion, in the shape of a handy volume, as has been done, for example, by Prof. Flower for the Horse, by Taylor for Anthropology, and by Bennett for Cryptogamic Botany. There is a real need for such a book.

**HYGIENIC MEASURES IN RELATION TO INFECTIOUS DISEASES:** Comprising in condensed form Information as to the Cause and Mode of Spreading of Certain Diseases, the Preventive Measures that should be Resorted to, Isolation, Disinfection, etc. By GEORGE H. F. NUTTALL, M.D., Ph.D. (Göttingen), Associate in Hygiene and Bacteriology, Johns Hopkins University and Hospital; Member of the Association of American Physicians, etc. Pages xii, 112. New York and London: The Knickerbocker Press. G. P. Putnam's Sons, 1892.

THIS handy little volume could not have arrived at a more opportune time, when so much general interest is being shown in the means of preventing the spread of infectious and contagious diseases. The subject-matter is compiled from the latest conclusions of the best workers in this field, and will be of value to anyone who is practically interested in the subject.

The book contains, among other subjects: General considerations upon thermal and chemical disinfection, with remarks upon the special agents and practical directions for their employment; precautions to be observed by physicians and nurses in attendance upon the sick; also precautions to be taken by the other inmates of the



house; care of the sick-room; the disposal of infected clothing and bedding, etc., in hospitals and private dwellings; disinfection of excreta, water-closets, cess-pools, etc.; the disinfection of a room in which an infectious disease has existed; information as to the causes and mode of spreading of certain infectious diseases, and the preventive measures that should be resorted to; and surgical disinfection. Throughout the book "brevity" has been the watchword—a consideration that makes the work especially convenient for reference.

## CORRESPONDENCE.

### LOW-POWER OBJECTIVES IN MICROSCOPIC DIAGNOSIS.

To the Editor of THE MEDICAL NEWS,

SIR: In this day of microscopic investigations in the diagnosis of diseases, we find almost every practitioner of medicine in possession of a more or less valuable microscope, and doing a certain amount of microscopic work in some line or other. It is to be feared that the majority of these would-be investigators are led to the purchase of a microscope more from the fact that it is a popular "fad" than from real motives of investigation, or as an instrument facilitating the diagnosis of many diseases; but be that as it may, the fact remains that very few physicians not specialists in microscopic work are able to make correct diagnoses of even simple growths and neoplasms. I have observed, even among men who paid considerable attention to microscopic manipulation, that very few are able to tell with any certainty the difference between even well-marked benign and malignant growths.

There are certainly some good reasons for this, one of which is undoubtedly the fact that most of these men have taken up microscopic study after leaving institutions in which competent instruction in some of the fundamental principles of microscopy is given; but from personal observation I believe that the real difficulty lies in the fact that the majority of persons do not use objectives of proper magnifying power. There seems to be a fear of using too low magnifying power, and consequently the opposite result follows, and we find altogether too high a power being used.

The majority of amateurs seem to feel that any magnifying power of less than 500 diameters is too low, while experience shows that a power of about 100 diameters is much better for the ordinary diagnosis of tumors. With a power of 500 diameters the field of vision is extremely limited, and one sees more of the individual cells than of the general arrangement of structures. In other words, he looks for special landmarks and avoids the "bird's-eye" view. This, I believe, is the true fault. A field of the microscope may justly be compared to a landscape, with the landmarks of clumps of trees, rocks, etc., represented by clumps of cells and various structures. No person, in attempting to recognize a new country, would look at individual trees or stones, but would rather take a general view of the whole from some hill-top, and then confirm the opinion thus formed by more minute examination of the woods and plains. Just so with the "microscopic landscape" of a new tumor. The low power (say, 100 diameters) is the

bird's-eye view, and the grouping and arrangement of cells will give a better clew to diagnosis than individual cells can, no matter how well stained or how clearly defined by the lens.

It seems almost impossible to shake from the minds of the general mass of physicians the idea that each neoplasm should have its own particular characteristic cell, peculiar only to itself. I believe it is the remains of this old idea that leads to the use of high-power lenses in attempted diagnosis. When the amateur microscopist will shake off this idea and confine his attention more to general views with lower power objectives, I believe he will find it much easier to make correct diagnoses, at least of benign and malignant growths.

Very respectfully yours,

E. H. WILLIAMS.

IOWA CITY, IOWA.

### TRAUMATIC SEPARATION OF THE LOWER EPIPHYSIS OF THE FEMUR.

To the Editor of THE MEDICAL NEWS,

SIR: In the *Montreal Medical Journal* for March last, there appeared a paper by Dr. John M. Elder, of Montreal, on "Traumatic Separation of the Lower Epiphysis of the Femur." In it he refers to an article on the same subject, published by me in November, 1890, in the *Annals of Gynecology and Pediatrics*. He speaks of it as having appeared "some time ago," thus giving the idea that it was an old affair; he also says that he is "indebted to it for many references." He goes on to state that he has "managed to disinter from medical journals" over seventy cases; and concludes the text of his paper in these words: "Subjoined is a list of references to the literature of the subject, so far as I have been able to investigate it."

He then presents an accurate copy, even to a slight typographical error, of a list appended by me to my paper. He probably failed to notice the fact that eighteen of the items contained in it were not "disinterred from journals," but derived from books. In adding my article to it, he omitted both name and date.

Now the preparation of that list had cost me many hours of labor; and upon discovering Dr. Elder's bold and disingenuous appropriation of it, I wrote to the editors of the *Journal*, calling their attention to the matter. I also sent them a copy of my paper. My letter was handed by them to Dr. Elder, who wrote to me enclosing a draft of a "correction," which he proposed to insert in the *Journal*, apologizing for a "careless omission" of my name. This I declined to accept, and I wrote to the editors that my complaint was not of a careless omission, but of a deliberate and dishonest claim by another to work done by myself. At their suggestion I then wrote out for publication a statement, as courteously worded as I knew how to make it, considering the unpleasant nature of the facts, and sent it to them on the 12th of July.

On the 21st of that month the manager of the printing-office wrote me, saying that one of the editors was very ill, and the other two were abroad; and proposing to hold my letter until the return of those gentlemen, which he thought would be in time for the next issue of the *Journal*. To this, of course, I agreed.

Nothing more was done until November 22d, when I

wrote again to the editors about the matter, but they have made no reply.

I am fully confident that they unwillingly became accessories to Dr. Elder's literary theft; but am surprised that they did not feel constrained to promptly express their disapproval of it upon its being brought to their notice. By abstaining from so doing, it seems to me that they tacitly connived at it, becoming, in legal phrase, accessories after the fact.

When frauds of this kind are committed, it is not merely the individual that suffers; an injury is done to the whole profession. This injury is intensified if the error is condoned or winked at. It is upon this ground, and not from any desire for personal redress, that the present statement is made.

I am, Sir, respectfully yours,

JOHN H. PACKARD, M.D.

1924 SPRUCE STREET, PHILADELPHIA,  
December 28, 1892.

#### EARLY OPERATION FOR APPENDICITIS.

To the Editor of THE MEDICAL NEWS,

SIR: If the subject is not worn threadbare, I should like to report the following abstract of a case recently under my care. It emphasizes one of the deductions in your editorial of the 10th inst.: "Do not hesitate, if the symptoms are growing worse, to open and explore."

W. D. V., a previously healthy, well-developed young man, was taken suddenly to bed with agonizing pain, at first referred to the epigastric region. Deep pressure elicited severe pain limited to a space about two inches square, deeply situated just where McBurney has described the appendix to be. The patient always insisted that "there is a lump there, causing my trouble." No tumor could ever be made out, but deep pressure always located the one seat of pain. The anxious face, the readiness with which all else was dropped and the patient's whole attention was absorbed by his abdominal trouble, were to me conclusive evidence of something very serious.

The history of the appendicitis is similar to that so often recorded. The bowels were moved daily. Hot poultices for three days were followed by ice poultices. Considerable morphine was occasionally required.

On the fourth day, I desired to cut and explore. Good authorities urged that, because no tumor was felt, operation might advantageously be delayed. Chill and sweat presented on the eleventh day. Operation was then performed and an ounce of pus was evacuated from a sac formed by the agglutination of the head of the cecum, the appendix, and the abdominal wall. The gut was of black hue, and friable. The appendix had discharged through a small hole in its neck. The parts were thoroughly washed out with boiled distilled water. The appendix and all gangrenous tissue were removed, a drainage-tube was carried through the lumbar region in the back, the peritoneum was sewed up, and the wound closed.

Everything did well and the hopeless case promised to recover. On the fourth day, however, a chill occurred and symptoms of shock set in. Examination revealed a small stitch-abscess over the peritoneum, whose wound was perfectly healed. The drainage-tube, it was found,

did not drain. It was thoroughly cleaned out and the stitch-abscess was also treated with antiseptic attention, but the patient passed from the state of shock into collapse and died in six hours.

It seemed to me that in this case, operation had better have been performed early, say on the fourth day, before the pus had come. Secondly, when the shock (probably due to the rupture of the rotten gut) appeared, it had been wiser to have opened the peritoneum and placed sterilized or medicated gauze in the old abscess-site, covering the intestines well and leaving the wound open. Thirdly, in such a case a drainage-tube does not drain, and hence is worse than useless.

Respectfully,

T. R. CHAMBERS.

EAST ORANGE, N. J.

#### OBSTACLES TO A NATIONAL QUARANTINE.

To the Editor of THE MEDICAL NEWS,

SIR: I have read with interest your leader in the issue of December 24th, on National Quarantine, and I would like the privilege of a word in reply. The advantages of a National quarantine have of late been fully and ably stated and seem to be generally conceded.

In regard to the objections you raise, you admit that, with the exception of the alleged Constitutional obstacle, "no one of them is very strong by itself, and each one can be overcome if taken singly." Therefore they can be disregarded. As for the Constitutional question, as you say, every one admits that Congress can establish and control quarantines against foreign countries; but, if I understand you aright, the trouble you anticipate is that the State might refuse to abandon its own quarantine system, and that the State and National quarantines might conflict. If you will pardon me for saying so, I believe this objection to be wholly imaginary, for two reasons.

First, because if an efficient National quarantine were to be established, the local quarantines would doubtless pass into "innocuous desuetude," or out of existence altogether, because they would have no function to perform. If, on the other hand, the National quarantine should at any time prove to be inefficient, it could do no harm to have it supplemented by the local organization. I fail to see how a local quarantine can make the authority of the United States "practically nil."

It certainly could not admit any person or thing which the United States authorities had excluded, and if it stopped those which the National quarantine had passed, it would appear to be only an additional precaution, or, at the worst, an unnecessary one. That the double quarantine would present such an obstacle to commerce as to materially impede it is a contingency not very likely to arise, as it is not probable that a State will take measures to destroy the commerce of its own ports. The New York Chamber of Commerce is probably as much interested in this question as any body of citizens, and it has emphatically declared itself for National quarantine.

Secondly, it is a well-known principle of Constitutional law that where authority is granted, all powers are by implication granted which are necessary to enforce that authority; hence, if Congress has the power to establish National quarantine, and local quarantine should

prove to be an obstacle in its way, Congress has implied power to annihilate, if necessary, the latter.

Respectfully yours, J. H. PLATT.

LAKEWOOD, NEW JERSEY.

# DIABETES MELLITUS FOLLOWING AN INCISED WOUND OF THE HEAD.

To the Editor of THE MEDICAL NEWS,

SIR: The case herewith reported presents features of interest that seem to make it worthy of publication.

P. H., a male, eighteen years old, was, with a companion, cutting down a tree, when the axe glanced, causing an incised wound over the temporal bone, about one and a half inches long and one-half inch deep. The wound healed by granulation and nothing more was thought of the occurrence until about a month later, when the man, who had previously seemed perfectly healthy, commenced losing flesh and voiding a large quantity of limpid urine, amounting in twenty-four hours to one hundred ounces or more. When first called to see the patient, I at once noticed the increased urinary discharge, and on examination found an enormous quantity of sugar present. The patient sank rapidly and succumbed about four days after my first visit. From the previous good health of the patient and from the fact that the symptoms appeared so soon after the wound of the head, it seems possible that there may have been a causal connection between the wound and the diabetes, there being no hereditary predisposition to the disease.

Respectfully,

J. B. LOCKRIDGE, M.D.

DRISCOL, POCAHONTAS CO., W. VA.

# ANTISEPTIC MIDWIFERY.

To the Editor of THE MEDICAL NEWS,

SIR: THE MEDICAL NEWS for November 26th last contains an article by Dr. Garrigues on that always interesting subject, antiseptic midwifery. It is somewhat unfortunate that Dr. Garrigues should quote, in support of his position, the statistics of the New York Maternity Hospital. The showing is not very favorable: in eight years the deaths have been 1 to 106 confinements; those from sepsis, 1 to 453 confinements. It seems to me that the statistics of the Preston Retreat, of Philadelphia, afford more convincing evidence of the virtues of antiseptic midwifery. Here is a maternity that, by a kind of natural selection, draws from the poor classes of a large city its most difficult cases; and yet the showing is 1000 cases without a death. (A case admitted in a dying condition from eclampsia has very properly been omitted.)

Respectfully, FRANCIS L. HAYNES, M.D.

LOS ANGELES, CAL.

# HYDRIATIC OR HYDRIATIC.

To the Editor of THE MEDICAL NEWS,

SIR: Allow me to say that though Dr. Sihler is correct in the use of the word hydriatic as an adjective applied to treatment or procedure indicating treatment or procedure with water, this word cannot with propriety be applied to some nouns, such as school or institute.

Here the adjective hydriatic is correct, because it is derived from *hdw*, water, *larpich*, medical treatment, a school or an institute for the medical treatment with water.

Hydriatic is a shorter word for hydrotherapeutic, expressing exactly the same thing. It would, therefore, be tautology to say hydriatic treatment, while hydriatic treatment would be correct.

Respectfully, SIMON BARUCH, M.D.

51 WEST SEVENTIETH STREET, NEW YORK.

# NEWS ITEMS.

*Society Meeting.*—Philadelphia Pathological Society, January 12, 1893, 8.15 P. M.

*Pasteur* was seventy years old on December 27th. The event was observed by a special celebration.

# BOOKS AND PAMPHLETS RECEIVED.

The Remedial Uses of Hypnotism. By Frederick Henry Gerish, A.M., M.D. Pamphlet. Portland, Me.: William M. Marks, 1892.

Adenoid Growths of the Naso-pharynx and their Treatment. By A. W. De Roaldes, M.D. Reprint, 1892.

Consumption and Kochine (Tuberculinum Kochii). II. By Rudolph Seiffert, M.D. Authorized Translation by Wolf von Schierbrand. Chicago: Ed. Ackermann & Co., 1892.

Why Hygienic Congresses Fail. Lessons Taught by the International Congress of 1891. Pamphlet. By Elizabeth Blackwell, M.D. London and New York: George Bell & Sons, 1892.

The Mechanical Aëration of Water. By Prof. Albert R. Leeds, Ph.D. Reprint, 1892.

I. Abcès du Larynx dans la Scarlatine. II. Un Nouveau Cas de Chancre Induré de la Fosse Nasale. Par E. J. Moure, M.D. Paris et Bordeaux: Feret et Fils, 1892.

A Treatise on Nervous and Mental Diseases. By Landon Carter Gray, M.D. Philadelphia: Lea Bros. & Co., 1892.

A New Consideration of Hereditary Chorea. By R. M. Phelps, M.D. Reprint, 1892.

Fissure of the Anus and Fistula in Ano. By Lewis H. Adler, Jr., M.D. Detroit: George S. Davis, 1892.

The Physician's Visiting List (Lindsay & Blakiston's) for 1893. Philadelphia: P. Blakiston, Son & Co.

Albuminuria of Pregnancy: Two Cases. By Andrew J. Downes, M.D. Reprint, 1892.

Address Delivered before the San Francisco County Medical Society on Retiring from the Presidency. By D. W. Montgomery, M.D. Reprint, 1892.

The University of Chicago, 1892-3. Program of Courses in Biology. Chicago: The University Press, 1892.

Physiology. A Manual for Students and Practitioners. The Students' Quiz Series. By Frederick A. Manning, M.D. Philadelphia: Lea Bros. & Co., 1892.

A Treatise on Diseases of the Rectum, Anus, and Sigmoid Flexure. By Joseph M. Mathews, M.D. New York: D. Appleton & Co., 1892.

A Manual of Bacteriology. By George M. Sternberg, M.D. New York: William Wood & Co., 1892.

Tincture of Calumba, with Remarks upon the Injurious Influence of Light on Some Preparations, etc. By J. B. Moore. Reprint, 1892.

The Paralysis in Children which Occur during and after Infectious Diseases. By M. Imogene Bassette, M.D. Reprint, 1892.

Tubercular Otitis of Tarsus—Rheumatoid Arthritis of Tarsus. By H. Augustus Wilson, M.D. Reprint, 1892.

Report of the Board of Trustees of the Eastern Michigan Asylum, at Pontiac, for the Biennial Period Ending June 30, 1892. Lansing: Robert Smith & Co., State Printers and Binders, 1892.